NORDEA GOES GREEN WITH IT: From 2007-2010

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Executive summary

To become sustainable, or green, is in Nordea not a process that is forced upon the organization by top management. On the contrary, it is a smooth and soft process lead by champions and supported by the management team. One could compare the process with the game curling, where a small grain of sand might stop the curling stone to reach the nest. In the greening process of Nordea it is a risk that the process might be set back for several years if it is not carefully managed. To ensure that no grain of sand hinders the process, a slow and incremental strategy is in place. The process is supported and encouraged by the management and grounded in the corporate values.

The greening of Nordea creates a feeling of proudness and involvement among employees. There is no direct opposition against the greening, but some individuals perceive it as slightly outside the core business – "*we are a bank*". Besides from the champions that drive the process internally, pressure comes from external stakeholders, such as potential employees, customers, and institutional agencies. Nordea also attempts to influence its environment by participating in institutional agencies and negotiating with its suppliers and thereby creating a push towards greening that reach beyond its own organizational borders.

We see the role of IT in Nordea's greening process as part of a four-phased process: 1.change in corporate values, 2. formalization and structure of corporate social responsibility, 3.establishment of Eco-footprint projects, and 4. utilization of IT to become greener. In the greening process, "Green IT" is utilized in three fundamental roles: firstly to reduce energy consumption by IT itself (e.g. virtualization of servers or shutting down computers at night), secondly to transform work processes into less resources-demanding processes (e.g. use of video conferencing instead of travelling), and thirdly to inform the organization about resource consumption in order to make visible potential efficiency improvements in existing operations (e.g. energy consumption in facility management).

Our perception is that Nordea is among the leading organizations in Scandinavia when it comes to use of IT to become greener. The area where Nordea has reached furthest is in the reduction of power consumption of IT itself. These projects, including virtualization of servers and personal computers, power off, and stand by time for computers, leads to power savings without upsetting existing work practice or require behavioural changes. Starting in this end has probably been wise as a mean to build confidence in the greening initiative's ability to deliver value for Nordea. However, IT is generally perceived to account only for some 2% of the total energy consumption in the world. For the future, we therefore foresee a great potential in more extensive use of IT's transforming and informing capacities.

A key challenge for the future will be to attract and maintain people with appropriate experiences and competences to lead these projects. As for now Nordea largely invent its greening process itself – it would be of great help to find ways of drawing on experiences made in other organizations. Another challenge is to develop and implement new green KPIs that influence individuals' behaviour, for example when it comes to internal travel. Finally, we also see a need to reflect on and take actions to ensure the greening process' robustness and enduring capacity. What will help in overcoming future problems and barriers? Problems are likely to appear if IT is used to transform operations to work in more efficient ways.

Introduction

This report aims to give an account of how Nordea has transformed into an organization that utilizes IT to improve its business' ecological sustainability and what are the potential future steps that can be taken.

A transition process of this kind is multifaceted and complex. Getting to the very details of it while still keeping track of the overall picture is a challenge. The report combines high and low, breadth and depth. It has no ambition to be complete in its account for Nordea's transition, but rather to dig deep into situations and actions that exemplifies the transitions. It aspires to account for the breadth of these situations and actions, but not to give a complete listing of those actions. It presents low-level details, but aspires to position these details to the essence of the transformation process.

To the extent possible, we will let the interviewees themselves tell the story through quotations. Quotations from interviews are verified and approved by the interviewees, but analysis and conclusions of the interviews are the work of the authors of this report.

Company background and history[1]

With its 11 million customers, 33 809 employees and 1 400 branch offices Nordea is one of the largest financial institution in the northern part of Europe. The bank is in generally healthy condition, indicated by a profit of just above € 3 000 million during 2009. However, the path to this position has neither been straightforward nor without obstacles.

The mergers

Nordea originate from four Nordic banks that during 1997 to 2001 were merged and joined under the label Nordea:

•   Merita Bank (Finland)

•   Nordbanken (Sweden)

•   Unibank (Denmark)

•   Christiania Bank og Kreditkasse (Norway)

These four banks were themselves results of numerous mergers and acquisitions - what today is Nordea is the combination of in total more than 250 banks. Traces go as far back as 1820 when the Danish bank Sparekassen for Kjøbenhavn og Omegn was established.

Merita and Nordbanken were joined in 1997 into MeritaNordbanken after the Nordic capital market had recovered after the Nordic financial crisis in the early 1990'ies. The financial bottom mark for Nordbanken was reached in 1992 when the Swedish government took over all shares in the company in connection to providing new capital to cover the losses sustained during the crisis years. Also in

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[1]From www.nordea.com. Financial numbers from Nordea Annual Report 2010.

Finland the banks struggled in the early 1990'ies, which resulted in the formation of Merita from several Finish banks.

In Norway banks also struggled in the 1990'ies. In the wake of the crisis Sunnmørsbanken and Sørlandsbanken were merged with Christiania Bank og Kreditkasse. In 1991 the bank's shareholders' equity is exhausted and the state injects new capital, thus becoming the owner of the bank. In 1999 MeritaNordbanken makes a bid for Christiania Bank og Kreditkasse which is accepted in 2000. In between the bid and the acceptance MeritaNordbanken had announced its merger with the Danish Unibank, itself a merger between Unidanmark (the parent company of Unibank), Danish insurance company Tryg-Baltica, and Norwegian insurance company Vestas. In 2001 a massive campaign was launched to establish the name Nordea in the minds of the customers.

Current position

Only two decades ago most of the banks that now make up Nordea were bleeding financial units with battered self-confidence fighting for their survival. When CEO Lars G. Nordström was appointed in 2002 he was presented as a man with strong focus on performance and profitability. During his period in office the keywords were "focus, speed, performance".

Today Nordea is a highly profitable bank, despite the financial crisis that has caused severe losses among competitors. The operating profit in 2009 was € 3 000 million..

The Case Study

In this part, we discuss the methodological approach we have followed to collect our data, background information of Nordea, its greening process, and findings from this case.

Data collection

Interviews were the primary method of data collection, see Table 1. Initial interviews were based on a broad framework, including strategic, organizational, managerial, and technological aspects related to Green IT. The ambition was to identify relevant initial conditions, states, events, and transformations in Nordea's Green IT development process. The interviews started in March 2010 with the Green IT manager to get an overview of the development process. After initial interviews, it was jointly decided together with Nordea representatives how to expand the study.

Subsequent interviewees were selected based on their ability to provide information on how strategic, organizational, managerial, and technological aspects interacted in the Green IT development process. The subjects included both line and IT executives at senior and middle level management. Interviews were wide-ranging and conversational to facilitate the collection of information to contribute to both theory development and future data collection.

Nordea had one requirement on the collaboration, namely that the interviews did not contribute to the CO_2 emissions. Consequently, we did most of the interviews over the phone, except for those that were local to the interviewers. The interviews were recorded and transcribed. External and internal documentation, including annual reports from 2005-2010, CSR reports from 2009-2010, projects plans for Green IT projects, workshop documentation, project proposals, and return on investments-analyzes, were used to complement the interviews and to triangulate research findings.

Table 1. Interviews

Position/role	Abbreviation
Green IT manager and project manager for Live meeting	GIT manager
Project leader, Video conferencing	PL Live meeting
Active user and idea creator	User
Project co-worker, conferencing	Project member
Group IT Communication	GITC
CSR manager	CSR manager
Premises manager and Ecological footprint manager	Premises manager of Eco-footprint manger
Project leader of Power off	PL. Power off
IT developer of Power off	IT developer
Chairman Green IT committee	CGIT
Group IT Communication	GITC
CIO	CIO

The Greening Process

In this section the greening process of Nordea is described in four phases: change in corporate values, formal establishment of Corporate Social Responsibility (CSR) structure, Eco-footprint projects, and the use of Green IT. The presentation does not aspire to give a complete account for strategic actions and organizational aspects in Nordea. Rather it put emphasize on the use of Green IT and strategic and organizational aspects of Nordea to contextualize the description of Green IT use.

The new CEO and new corporate values

When in 2006 Christian Clausen was appointed new CEO, the appointment was associated with a shift in direction for Nordea. Christian Clausen brought in a new management style based on openness, discussion and consensus, and initiated a revision of the values inherited from Lars Nordström ("Focus", "Speed" and "Performance"). The new direction was based on three new corporate core values; "It's all about people", "One Nordea team", and "Great customer experiences".

From one point of view, this was the beginning of a more structured and formalized greening process or at least it was a link between corporate values and the greening process of Nordea:

> "I don't remember in what order or how everything happened, but I know, when Christian Clausen introduced the new values, he had already started these different initiatives and I am certain that is was Christian Clausen who started the discussion about CSR. How it was related to the values I don't remember, but there was an on-going study about CSR and environmental

impact. This report was published during an Executive Management Board meeting in the summer 2008." (Premises manager)

Compared to the previous values of focus, speed, and performance, CSR got a more natural home with the new values. The Chief Information Officer (CIO) also emphasizes this:

> "In 2007 when we got the new CEO and started a quite long process that led to the green values. It started with interviews of a couple of thousand of employees in the bank. Then we organised different group discussions and meeting at group management and executive management level. There were also many meetings where we discussed the new values.

> At the same time as we started this process to create a corporate social responsibility function we hired a CSR manager. At the same time we started to look into what it means to be social responsible and what it means from different perspectives. I would say that it means in short that you have to be a solid citizen aligned with laws and common morals. So that was the starting point.

> When it comes to Green IT, it was more or less Dennis who was driving this initially. He was inspired of new thinking and started to look at how we in IT could use Green IT. When he came to me, we went through his ideas in this area. He made a very good presentation and was able to link actions to CSR and our role on the globe and the impact we have on the environment. Like we all know, these actions are in many cases common sense and the fact is that they are issues that are impacting the people from our side on the globe. I was once at an open discussion in Sweden where we talked about that we were doing with green-IT and somebody started arguing that "no, no, that is not true, you are not caring about the nature only how much money you can save". In part this is true, but you can combine sustainable thinking, for instance you can take action that influence the globe into the right direction, and you can also have good financial outcome and in that sense Green IT is very based on common sense and on issues which are good for everybody." (CIO)

Corporate Social Responsibility

Corporate Social Responsibility (CSR) has a long tradition within Nordea and the merged banks.

> "It is very close to traditional Nordea values. In the long run it will improve the brand value of the bank. It includes both internal projects aiming at making the Nordic business more sustainable, but also activities aiming at sponsoring in different organizations and projects." (CRS manager)

> "Already in 2001 we received an award in Finland for building eco-friendly. We have been thinking about environment and sustainability well before the latest boom in interest. We participated in global sustainability congress in Oslo in 2002, for example." (Premises manager)

> "One element related to Green-IT that started already before we started to talk about Green-IT as such, was the computer centre centralization and virtualization of our server environment" (CIO)

However, until recently CSR-related work was not formalized into a specific structure. The different branches and units drove CSR activities, such as the energy saving in server halls by the IT department and eco-friendly buildings by the premises function. The formalized sustainability process of Nordea was in part a consequence of the value discussion and a response to what other banks were doing, for example Danske Banks' CSR report. Meanwhile there were on-going green activities at Nordea, including Green IT and improved facility management.

"In order to practice CSR and to be sustainable, it has to be a natural part of all the things that the bank do. Based on the three values: "It's all about people", "One Nordea team", "Great customer experiences ", well we think that doing responsible business is a prerequisite for staying in business. That's why these values and the thinking ties the story together, we need to have all Nordea employees to understand what is needed to be done and what responsibility is." (CSR manager)

"I think it came very naturally as part of our value profile. When our new CEO, Christian Clausen, started we renewed the values. CSR is a natural child of that process. The introduction of our values was the first wave and then came the understanding of the need to put CSR on top of the agenda." (CSR manager)

Organizing CSR

In process of establishing a more formalized CSR agenda a brand new position as CSR managers was established in the summer 2008. The position was created after a strategic discussion about CSR in the Executive Group Management and they appointed a head of CSR. The CSR manager reports to the group executive team even though it is not a line function. It is an integral part of the business. As the CSR manager explains it:

"It's part of the business, It's not a separate box next to the CEO, which is one way of doing it. I feel if you have a separate box somewhere called CSR with a team of people and a wonderful budget, you are able to create many things, but will it stay there, do people understand it? We took a more rocky road, chased it a bit longer… But now, whatever we do as business unit or central function unit we are responsible for incorporating CSR as part of our normal work." (CSR manager)

The work of CSR is governed by the principle having "the house in order". This means,

"that we understood that we needed to have 'the house in order'. Having it in order to be able to say that 'Yes, we do the responsible business'. That we do responsible lending, responsible investments, and so on. We need a license to operate; we need to be able to say that the way we run the business, the way we act in our everyday life and the way we behave is sustainable – it's a license to operate. If you cant say that then you cannot be among the best companies and you can't develop your business." (CSR manager)

The CIO expresses similar thoughts

"… we tried to see what kind of issues our people found important and motivating for them. In addition we were also following the rest of the world and noted that the leading banks were taking care of their CSR. With our corporate value of creating great customer experiences, then you have to be also solid yourself." (CIO)

The CSR manager has a limited formal governance structure to enforce sustainable practice or behaviour. This is evident when reviewing Key Performance Indicators (KPIs), where sustainability has limited scope. Overall it is a challenge to influence behaviour on the office floor.

"It is really challenging. Of course what is measured first is the business goal of the employee, but I am sad to hear if they (employees) don't get any feedback about their sustainable behaviour. It should not be like that. I understand that there are not extremely many people who have individual targets that are directly, solely and only related to sustainability. I know that especially in the team members of the Nordea Eco-footprint – I presume that it is put very high on their annual targets

so to make these projects succeed. But when it comes to the normal bank advisor in a branch office it may be harsh to say, but I don't think it is in their daily targets. There is a focus on the service towards the customers." (CSR manager)

CSR influencing business

The CSR policy rooted in the corporate values influence all kinds of business activities from responsible lending and to responsible investments. When it comes to lending there are two types of lending, overall corporate lending and project finance.

> "Responsible overall corporate lending focuses on the understanding how the specific customer is acting and its social, political use. Project finance, focus on the specific project and assess whether criteria are met. Responsible investments focus on having different types offerings so that the investors (the customers) can choose from a variety of investment funds and that these are managed in a sustainable manner. To support and even enforce sustainable lending and investments Nordea has signed UNAPFRI (United Nations Process for Responsible Investments), Equit-principles, and other treaties. In addition, Nordea follow the OECD guidelines for multinational enterprises (MNE). To support this, a number of internal computer based tools, processes, and external analysis are used. " (CSR manager)

Another tool used to support sustainable business is a tool for tracing carbon footprint. The information from this tool is distributed to all the financial controllers and is also used in the CSR report, where the carbon footprint can be traced on a quarterly basis. The data could potentially be used as a management tool so managers can keep these as KPI's.

> "We have objectives that we publish in the CSR report. And when you publish these goals, you commit yourself to act in this way, and also to measure the outcome of it. We have understood that we must strive to become more environmentally conscious when we do business, and we have figures showing that we have streamlined our energy consumption and reduced leak." (GITC)

Outside the organizational borders of Nordea, Nordea seeks to influence suppliers by ethical and sustainability codes of conduct. As the chairman of Green IT committee (CGIT) describes that suppliers have to be compliant to the overall CRS guidelines, this initiative has been running since 2008.

> "All our IT suppliers need to be complaint to Nordeas CSR guidelines. We don't have any formal clauses in our contracts with our suppliers specifying CSR compliance, but the suppliers are checked so that they don't break our policies. This can be CO_2, child labour or any misuse in the production of any inputs utility that we need for our business.
>
> CSR compliance is one of the criteria that we have for all procurements. If the supplier doesn't meet the minimum criteria they are out. This is very critical for Nordea, because it's our reputation that is on stake. There is an increasing awareness of CSR and our environmental impact, which have an affect on the type of decision we make. For instance, there are no longer any plastic spoons at our coffee stations. We are making this type of decisions all the time, they are small but it is the right path and goes beyond IT." (CGIT)

While the codes for suppliers are directed to specific organizations, Nordea also takes part of more general attempts to influence the business society at large. One of these initiatives is the participation in the "Carbon disclosure project".

"Another way that Nordea attempts to influence its business environment is by participating in the "*Carbon disclosure project*" which is a program founded in London, 2000 (by some of the largest investment bankers and is backed by several trillion dollars). It challenges corporations around the world to disclose their carbon footprints and strategies. We as banking and investment community put pressure on these companies by telling them that their footprint numbers makes a difference in our view." (CSR manager)

Eco-footprint

The umbrella of Eco-footprint organizes and structures a number of projects, focusing on the environmental impact of the bank. The Eco-footprint initiative consists on eight different projects (internal and external paper, internal logistics, waste, water, energy etc), including the Green IT as one initiative.

"It must have been in the summer of 2008, during a presentation or proposal about CSR. I think that after that meeting Green IT was established. I proposed that we could start the Eco-footprint project and I got a green light from my superior and then it became my unit's initiative for 2009. Then after some few weeks, I heard there was a person appointed to become head of CSR. I contacted her and told her that we had started this, there was a 'full match' with her thinking and we started to cooperate very close.

We have tried to collect all our eco-projects under the same umbrella, so to communicate and report easier, and give the total picture of what is happening. "(Eco-footprint manager)

Much of the pressure comes, according to Green IT committee chairman, through new management goals, such as to reduce the paper consumption with 50% over next few years.

"Today, our ambition is to get CSR into our policies and long-term business objectives. One such objective is a new policy on reducing Nordea's printing by 50% in 2016. We do print a lot. However, in some areas the reduction is difficult, since some costumers demand to get account statements and annual statements on paper. In cases when we need to print we aim to use environmental friendly paper. " (CGIT)

This situation for green initiatives have change the situation is much more favourable now. The chairman of the Green IT committee summaries the situation as:

"move to action now." (CGIT)

To illustrate the change in time the CIO gives an example of projects that wasn't possible before

"… we have this sleeping service for work stations that probably would not have started before these structures came into place. And there are activities about finding ways on how to reduce travelling and so on. I don't believe that those would have been so high on the execution list without having clear linkage to the new values." (CIO)

In 2008 Nordea was culturally and financially ready for the establishment of Eco-footprint projects. By this time some people had already seen the potential of a move in this area, but initiatives were overshadowed by the economic reality.

"Of course when Nordea was born after these mergers, they had many things on the agenda, reorganizing etc. It was only hard business on the agenda. The whole atmosphere has changed between 2003 and 2008." (Eco-footprint manager)

Meanwhile there was a growing interest in green issues.

> "Green solutions emerged as a topic at the IT infrastructure department in 2008, when we started to look at the efficiency of the department and of our suppliers. This what about the same time as emissions became a hot topic following the Tokyo and Copenhagen summits." (CGIT)

Internal and external communication

An essential part for leveraging value from Eco-footprint projects is communication with stakeholders. The purpose is both to make sure that Nordea understands the stakeholder´s (including employees) interest in sustainability and that the stakeholders understand what Nordea is doing in this area. To communicate the Eco-footprint Nordea has a team called 'communication and behaviour' which focus on making sure that Nordea get the message through.

> "How should we communicate and how do we make sure that we with that communication change the behaviour? We do have challenges in reaching reach all our people. We have already decided to translate all information, even though English language is the corporate language we know that when you go to the branch office and you are in a hurry during mornings and you open the Internet, then there is a challenge to start reading about something if it is not in your mother tongue. So we have done that, and we have all sorts of material and tips, info, regarding achievements and targets. But we still know that we are not reaching everybody, so this is something we constantly are working on – which tools should we use to reach everybody - also those who do not read the intranet." (CSR manager)

> "We are trying now to make our environmental initiatives part of the communication planning. In our external articles, we are also trying to get the key messages relating to Green IT. When someone from IT is interviewed we think ahead of what we would like to bring up, what we should have in mind. Green IT is something that obviously is very important, so of course the message needs to go through. The answer to "How do we do with Green IT?" should also go through externally and not only be an internal concern." (GITC)

How Nordea works with employee communication can be exemplified with the campaign to collect "green ideas" from the employees.

> "Let's see then how this did start. Well, we had found that CSR was something important, to work with Ecologically footprint was important. Now, we needed encouragement to write more than only Intranet articles. "We" were the leaders and people doing the Ecological footprint work, in the eight different elements that are there. Then we got the idea to do some kind of campaign. The Green IT manager, together with another person, had thought a bit on making a green campaign for IT. Just a Green IT campaign. When I heard that, I thought: 'No, I think that's a bit wasteful'. You see, we aren't a campaign organization. We do not campaign very often if it is not about our branch's sales of cards and things like that. We are restrictive with internal campaigns. So I thought that this with a green campaign would be great, but it would be lifted above only IT, which you probably will find very wrong I did, but we put together a group where we discussed what this would include. What could we do? Sponsors and decision-makers were CSR manager and Premises manager. We agreed to make a green campaign where we could engage our employees to make suggestions for activities that they could see in their everyday work, suggestion that would make Nordea a "greener" company.

> We did not set any larger framework more than that and said that we were to use the intranet as a channel to spread the information, and then we began to produce. We produced Intranet articles

for this contest and described the content. We selected the prizes you could win, and we used a barometer on the intranet with questions as: 'Do you think you could work more environmentally conscious than you do today?' We also put this in connection with the Copenhagen conference, because we thought it was an important economic engine, where the climate was high on the agenda. Then we had the competition published on our Intranet and started getting suggestions. The intranet is a channel within the Nordea who are able to reach about 34 000 people. This doesn't happen though, because not everyone read the articles, but you could say that if we are lucky, we reach 6 000 employees." (GITC)

"I don't remember exactly how it came up, but we had been thinking about a campaign that would involve the employees of Nordea – I think it came up in the 'communication and behaviour team'. This campaign was to improve knowledge about the job we are doing and to get bottom-up information and ideas - so that they feel they are involve. It was perhaps the person from group communication who was most active in this." (Premises manager)

Remembering group communication's (GITC) comment that the Green IT folks probably were a bit disappointed about the 2009 campaign did not become a Green IT campaign but a general sustainability-campaign its worth noticing a comment by the Green IT manager:

"We were at first discussing to suggest a Green IT campaign… but the issue with that would have been that people aren't too interested in many of the Green IT issues. Server virtualization, who really cares about that except the IT people ourselves…? That the campaign was broaden I think was essential to reach out to and to engage a broader audience. After all the Green IT issues have to be seen in a wider context to be really interesting." (GIT manager)

Group IT communication continues describing the 500 ideas project:

"I think we had the contest open in just over a week. I had actually hoped for a huge commitment in the enterprise. I think I had a wild idea of getting about 2 000-3 000 proposals and ideas, so I felt quite disappointed that we received 400 ideas. Then, I thought that it was very stupid of me to think that it would generate so many ideas, but because I myself am so involved, I thought everyone else also was too… Especially in the time of the climate summit when there was nothing but climate communications. But we received 400 ideas fairly evenly spread across the Nordic countries.

In the group that decided the winners, it was me, the CSR manager and the Premises manager. We tried to have a quota in the aspect that we wanted someone from each country. Many of the proposals received were similar, so we tried to sort of just a bit randomly choose one of the proposals to advance to the final finals. We selected 400 of these, 60 proposals, among which we then prioritized the 20 winners of which the first 5 we published on the intranet. Proposal and name… it was a little extra attention. The price they got was an American survival radio, which is solar based. Number 6-20 got a solar charger for cell phones. They were incredibly appreciated prizes. And what happened then was that all the ideas that came in, they went out to the responsible for each part of the "green" work." (GITC)

Separating the ideas and selecting winners turned out to be a difficult process:

"It was important that it should be possible to implement this, that it was not completely utopian ideas, but something where we felt that: "Well, in this form or in another form this should be feasible." We looked at it a little bit and it was fairly evenly distributed across the different countries.

The premises manger and his team did prioritize them based on some criteria. They made a no. 1, 2 and 3 selection from this list, based on the Ecological footprint. Today I can't remember exactly how the prioritization was done." (GITC)

In addition to more realistic expectations about how much response a campaign like this one can generate, the team also learned a few more lessons:

"I think we did not have any clear criteria for selecting the ideas. But as I said, we tried to choose the realistic ones, we had some nice proposals but impossible to implement. All in all, next time we do such a campaign we have to plan it more carefully. The problem was also that some people saw it as an opportunity to earn money, because we have a kind of permanent idea campaign "if I make a good proposal beneficial for the company, I will be rewarded" and then there were some people saying they had proposed this and that years ago and now that we had started implementing that and they wanted some money. For example there were somebody suggesting years ago that we should have automatic turn-off PC's. Now that we had implemented that he said it was his proposal and he should be rewarded for that – such issues mainly from Finland. So we have to inform them that in these campaigns that it is not part of such reward campaigns. You can understand most of these eco-activities, are also cost saving initiatives so a 10% reduction in paper can be a significant amount and if a person claim that he have put forward the proposal he also wants to be rewarded. " (Premises manager)

Moving Eco-footprint forward

Currently the Eco-footprint projects have established themselves and found their home in the Nordea organization. The arena is set, the willingness is there. What seem to be lacking is people with experience and knowledge for taking the work the next step.

"I think here in Nordea there are many 'green thinking' people, who have the mindset, but many times they do not have the right experiences to do it. In relation to my position where I have the mandate to hire people in this area, I look for people that have such competences and are adding value by also having the knowledge." (Premises manager)

"Finding a person that could coach and follow-up all of these things, - we have external consultants doing that, but it should be someone from inside Nordea doing this, someone who is very active in helping the teams direct their work and activities to the right areas. All the team members have their normal jobs and they do have knowledge about the specific areas, but not general sustainability. If we had the right person with the right network connected to knowledge sources, then this person could be sparring partner to the team leaders. That would help us to activate the teams much better than today. Also while the teams are dealing with their daily job tasks, this person should support them in finding possibilities, information and writing reports – it has to be a person that not only have the good will but also the knowledge." (Premises manager)

Stages

The greening process that has been ongoing in Nordea has evolved and moved through several stages:

"Yes of course if we look at the stages, I think the first is that we understood that green is something also with we can work with. It was very easy to see that our customers were investing in green tech and green energy and so on and the first thing we understood was: okay, we are also one of these companies that can actually impact on that – I would say that was the first stage. The second stage was to look at these elements on how to proceed in the first phase we also discussed the impact on our business. And now I would say that we are in the third stage in that sense that

we have made the first implementations and now it is time to look at how to that on a continuous basis so that we can find this in different areas so that in the projects we can impact on these environmental issues." (CIO)

A commentary view on the process is:

"I would say that this awareness phase was more or less discovered by the new functions of the CSR and those people who actually saw that they were the large consumer of the energy e.g. Dennis coming from the infrastructure part noticing how much our computers consumed, not only in terms KW but also in terms of CO_2 emission, compare our computer centre as well as our shared services …. Management who was the one who started to deal with this impact and started the first implementation and now when we are moving into the third stage where we shall take the benefit of these investments and really start to live within this continuous environment. That is very much based on the fact that there is set different targets by each management." (CIO)

Green IT

Similar to the case of CSR and Eco-footprint initiatives, thinking in terms of minimizing power consumption of IT and using IT to minimize Nordea's resource consumption is not entirely new to the bank. For example, the consolidation of IT capacity into the computer centres could be viewed as a green initiative as it led to power savings. However, with the establishment of a Green IT manager in 2008, Green IT found an organizational locus in Nordea. The Green IT manager, who is physically placed in the Malmö branch of Nordea, fills the position as Green IT manager. It was after and internal presentation by the Green IT manager that got attention by the highest top management. The CIO

"… after the launch of these new values and when Dennis made his presentation on how we could impact with IT, then we started to first time to talk about green-IT. It was in late 2007. That was the first time. And it was much because the things Dennis was saying were making a lot sense to us. So we decided to go further and start looking what we could do in these different areas."(CIO)

Organizationally the Green IT manager is part of the IT department, but has dual reporting lines. That is, he also reports to the 'head of eco-footprint', which is a part of the CSR function anchored at the highest level of the organization. While CSR is high up in the organization its budget is fairly low compared to IT, which is a part of group operations that has access too much larger budgets. IT is one of the bigger energy consumers according to the CIO:_

"If I remember it correctly the energy use of our centralized computer centre is equivalent to a village with 3700 houses. That is a much better picture to get someone aware of the size of our consumption, than saying how many kWh we are spending. (CIO)

The impact of Green IT can be quite large. A user from Britain gives an illustration from London based branch office:

"The IT Department needed to replace certain equipment and of course they bought greener equipment. In particular they had to replace the UPS, which was very old, getting unreliable and had high costs, and of course, also had huge power consumption.

Someone talked about the London branch saying how wonderful it was that they reduced the power consumption as much as they have. And that it almost entirely down to changing the UPS. It is quite amazing in fact, changing the UPS has reduced our power consumption for the whole branch by nearly 30%." (User)

Another illustration of the green impact comes from Chairman of Green IT committee:

> "One of the areas where we can make a difference is related to travelling and in particular when it comes to air-travel. My department, is one of the worst travellers within Nordea spent €1,3 million in 2008. Now we are down to € 500 000 in 2010. We now just have one physical meeting per month instead of each other week. So we have reduced the travel budget with more than 50%. Besides the financial savings we have better quality of life. So by reducing traveling Nordea saves money, the employees get a better balance between work and private life, leading to higher efficiency in work, and we are reducing our impact on the environment. When you have these three benefits it is a no brainer." (CGIT)

On the other hand the concept as such triggers reactions and thoughts, for instance such as:

> "What the heck is Green IT?" (IT developer)

Or

> "To be honest, I think 'Green IT' is only a buzz-word. My interpretation of the concept is 'action-based IT' -that makes the world greener – not the Green IT, but the actions behind. In relation, my manager drop by before I came here and I said that I had to leave for this Green IT meeting and he responded; 'I thought that was a dead concept'. Especially during this economic crisis it's all about bottom line: money – we don't have time for such as Green IT. " (Project member)

Appearance and views of Green IT

Nordea has adopted the term Green IT rather than Sustainable IT. In terms of goals for Green IT it's essentially looked upon from two different perspectives. The first perspective is of the efficiency of IT itself while the second is focused on using IT to reduce business impact in general.

> "One is what we can do to make IT more efficient... what we can do within IT to reduce the footprint. The other objective is to see where we can use IT to reduce the other impacts, for example we can use IT in order to collect billing information, heating and cooling so we can see which buildings are more efficient and what can we do for example with virtual meetings to reduce travel." (GIT manager)

Green IT has also become a symbolic carrier of intentions to make Nordea greener. That these projects are sanctioned from highest management is a clear signal to Nordea employees.

> "Well, to some extent it is symbolism, it's a marketing of visions for Nordea… but to me Green IT is principally on power consumption. There are also other consumables too; paper, toner and ink. The working office consumes a lot of those. Then there is also the life expectancy of the hardware. Changing everything every year… it's less green than keeping a piece until it falls apart even though you keep a piece that uses more power, if you include construction and shipping and… well, it may not actually be green to replace that machine in the end." (User)

The symbolic value also influences how it is perceived to work in green projects. For instance at the IT infrastructure department the manager gives an account for this:

> "To work with Green IT is perceived differently internally. It is not like working with an upgrade or replacing the entire network, the heavy task. It is more high profile, it is viewed as innovative thinking and for those how prefer this type of work, but it is not yet part of the core business." (CGIT)

Historically there have not been explicit goals in terms of sustainability. Projects and initiatives were mainly financially driven. The last few years things have changed, in the same way that general objectives has been established for the whole of Nordea:

> "The goal that we have now is to reduce electricity consumption within IT by 3% per year, which is a quite aggressive goal. […] It's also hard to set targets, because you can measure it in terms of energy consumption and you can measure it in terms of CO_2 emissions. If you measure it in terms of CO_2 emissions it's quite simple, we could just purchase green electricity and we would reach our goals quite simply – but, that doesn't really mean we are done I think, so it's a challenge to find the goals and set the goals, but we are in the starting process." (GIT manager)

Structure and organization

Green IT projects are internally driven with a steering committee made up of three persons: head of ecological footprints from CSR, head of infrastructural production and head of Nordic Processor which is partly owned by Nordea and Nordea's IT provider. IT in Nordea was outsourced 7 years ago to Nordic Processor, a company owned to 60% by IBM and to 40% by Nordea. Internally Green IT is loosely coupled network centred around the Green IT manager and with ties to Nordea employees that have a personal interest in that Nordea search Green IT solutions.

> "We know that not everyone is interested in green at all. There are very few contenders, but if 90% is not in opposition to Nordea becoming greener, only about 50% are willing to actively participate. And perhaps only 10% are that interested in these issues as we are. That is something we always have to keep in mind. Not pushing things to hard on people that already are very busy with their day to day tasks." (GIT manager)

On a recurring basis the network holds idea-generating workshops that have led to new Green IT projects. For new ideas the Green IT manager has to argue the business case.

> "Normally there is no problem finding the business case for the ideas that we propose. If there is any problem it is in changing the behaviour of employees, or that our projects are down-prioritized among all other good things there is to do. People only have a limited set of time and can cope with limited changes without their work being affected." (GIT manager)

This type of projects is very similar to the normal type of projects that Nordea normally run at IT Infrastructure, however there are differences. The IT infrastructure manager explains:

> "Green IT projects are not very different from other projects run by IT Infrastructure. Actually, the differences are smaller than what we expected. One reasons for this that we use the same project tools with the same business requirements as for any other project. For instance, we do the same business cases as we always do.

> The only big difference between Green IT projects and our normal projects is benefits realization. The benefits, we don't always see, since they emerge in other units. For instance, the energy savings from the power off project we don't see in our accounts, instead the gains are at Premises, that manage our facilities. To solve this issue we have mutually decided to split the benefits internally between the Premises and IT Infrastructure. Another example is if we come with an idea the lowers the energy consumption in our server hall. This benefit is only seen in the balance sheet of Nordic Processor - not Nordea.

> Another thing regarding staffing of projects is that you need people in the project team that are innovative. They have to be able to think differently and to be able to leave their comfort zones

and be ready to do things in new ways. You have to have people that are open-minded. This is a different competence needed. This is unique. Remember that we are conservative, that is part of our business. We manage risk, and this has been proven to be a good strategy. So the key is to find a balance in the staffing between our conservative – risk oriented – approach and the innovativeness." (CGIT)

We will here describe three initiatives that exemplify how Nordea work with Green IT. The first project, Power off, focus on minimizing resource consumption of IT itself, but have some consequences for employees outside the IT department as well. Second, the Video conference and Live meeting initiatives (organized as two individual projects) is also driven by the Green IT group, but intends not to cut power consumption in IT, but in general operations by the use of IT. Third, the facility management system is an example of how Green IT projects at Nordea can be driven by other organizational entities than the IT department.

Power off

The power off-project was the result of an idea that came from a Green IT workshop. Someone had noted that most computers in the office were still running at night after everyone left the office. The idea was that by turning off computers when not in use could save energy.

Project objectives and impacts

The project was simple and straightforward in its problem statement and suggested solution (Table 2).

Problem statement and suggested solution for Power off project
Current state
- There is no uniform Nordea standard on how to handle PCs at night.   - Some countries are instructed to turn off their PC and some to leave it on.   - Many software installations and patching are installed during daytime.   - No power management software is used on CLIP2-machines.   - A severe amount of electricity is wasted every year.
Target state
- PC's should be switched off every weekday at 19:00. (PC's should be completely switched off in the weekends).   - Users logged in at 19:00 should be warned and have the opportunity to abort the shut down process. (Alternatives will be investigated, such as sleep mode, etc.).   - Installation updates should be sent out during night-time. The computer should be woken up, have the installation done, and then be switched off again.   - Users should turn their computer on manually in the morning.   - Users or departments that needs an exception from computer shut down should apply for this in a defined approval process.

The project leader of the Power off project made an investigation of how to technically implement the desired solution.

"I looked around to see what the alternatives were. I did not do any full investigation process, or RFI, or whatever it's called… but a bit of hearsay and a bit on Google, a bit with the companies that could deliver this. I contacted 2-3 ones… plus our partners in Nordic Processing. I found that the distribution system we have, or management system for the whole platform, we could develop

just a little but and make it work as we wished. We could utilize the functionality we have today with some additional functionality, and then we would get away with small costs and still have the major benefits. And that was what the steering group decided that we would do, as I presented them with a few different proposals from third parties and from Nordic Processing.

The cost of the third-party products was pretty high. We could certainly have been able to drive down the price because we are so many clients that are involved, but still... the cost was very much higher using third-party software. So I wrote something called "request for service", that Nordic Processing would start developing this. I wrote it in March-April 2009." (PL. Power off)

The business case suggested that the total cost would be roughly € 80 000 for the first year, and then € 36 000 as annual running costs from 2nd year and beyond. Expected cost savings would be in the area of € 500 000. In the end implementation costs was about the expected cost, and cost savings has this far been estimated to € 360 000 annually.

"Energy consumption has gone down by about 10%. We think that much of this can be attributed to switching off computers at night." (GIT manager)

Project structure and implementation

The Green IT manager picked up the idea and got a systems analysts located in Gothenburg, to investigate possibility, cost and business case.

"Dennis has created the structure... He is responsible for the umbrella, so to speak, and underneath there are a lot of initiatives. He manages all the administrative and you get feedback from him too." (PL. Power off)

Since Nordea went for a custom-made solution by Nordic Processor, the project was a collaboration between the IT department and Nordic Processor.

"There is a management system for the entire platform that we use when we send out updates and all that. The management system is the foundation for our installed IT base. It contains basic functionality. The wake-up-function we needed existed in Denmark already. The function means that you can wake up PCs at night to re-install them. We said that we can exploit it and install it in the rest of the world together with a shut-down-function. We also needed to measure its use. It was very important to have statistics to really see that it has effect, and based the first numbers I saw that it seemed so." (PL. Power off)

When the rollout started it got a chill welcome.

"When we started rolling out, people - particularly in Sweden, actually – started to complain a bit. Probably they were not used to having to turn on their computers. In Sweden we've been accustomed to not turn off the computer. In the past, one would leave it on for updates, and it has lived on in Sweden. In Sweden the statistics tell us that it was many computers that was shut down compared with other countries.

I was also told that the computers are so far below the desks. Sure, it can be a pain to move them forward, it is perhaps not their job ... End the end the complaints was very few if you consider how many users there are. I measured how long it would take to boot with a standard computer, desktop, and it was not long at all. Under a minute, in fact. So it's just ... change, comfort and little stress, maybe. If you run and are too late for a telephone meeting and the computer has to start up…" (PL. Power off)

At the beginning many employees just saw the implementation as a hinder for them in doing their work.

> "The talking in the coffee room was: 'Are you doing this kind of 'velour jacket-work'?'. A bit like that, but then when you explained it, they understood.
>
> You could also hear in the coffee rooms: 'This does not matter, right?'. But when I explained that this hits quite hard… that it would lead to substantial savings. Then many began to understand that it probably was good anyway, because the impact was so big." (PL. Power off)

The selling argument was not in the project being environmentally friendly, but in showing how much money it earned for the company.

> "You could explain it in terms of CO_2 too, but that isn't as concrete. Money is more concrete. You can translate CO_2 into how many trees or how many miles in a car ... but it is still less concrete ..." (PL. Power off)

When the project was fully implemented, between 20 000 to 26 000 computers were shut down every night.

> "For what we can imagine, this system will turn off fewer and fewer computers in that this affects people's behaviour, that they turn off computers when they leave. I myself didn't turn off when I leave, and that was what we saw all over Sweden where people were not used to do it." (GIT manager)

The Swedish reluctance to turn of their computer is confirmed by the IT Infrastructure:

> "When it comes to IT, we have the power-off project that automatically turns off or puts computers and monitors into sleep mode. Historically this was a problem particularly in Sweden – where the staff left their computers on all the time. This project has saved a lot of energy and thereby money and the environment." (CGIT)

In relationship to the power off projects two there are two interesting finings. The first is that fewer and fewer computers turned off each night. In Dec. 2009 77% of all clients included in the system was turned of now one year later there are 70% turned off each night. More interesting is that the Swedes are in percentage not as good as the Finns, Danes, or Norwegians in turning of computers when leaving the work. On average on 10% of the Swedes turn off the computers, whereas the average among the other Nordic countries is between 45-70 %. The reason for this might be that Sweden used to upgrade computers over night, so they were not supposed to turn them off.

However, in general the Power Off or the Click to Power projects has not faced any major obstacles or technical issues.

> "Click to Power means that if you walk away from your desktop computer, the screen turns off after 16 minutes. That's the first part of the Click to Power project. The other part is currently in pilot mode. For laptops, we cut off spinning on the hard drives after 20 minutes. Desktop computers we put into sleep mode after 20 minutes.
>
> Having to turn off the screen has never been any problem at all. It went very fast and easy and everything flowed on, well. We have made exceptions for PCs in the surveillance rooms, with information displaying in our front offices on and such. However, we wanted from the beginning also have "sleep" on laptops, but could not because we lost the entire network connector. You got to login again, but you also had to boot the network itself, so you were simply disconnected. It was not very fun to be. " (IT developer)

Nordea have several video conferencing systems, from low-end system (such as Live Meeting in Microsoft Communicator) to high-end system directly connection meeting rooms of Nordea offices. The intended usage of Live Meeting is for everyday use between employees to support the internal interaction and to complement and enhance phone calls, instant messages, and e-mails. The top-management team uses high-end solutions in particular to support their weekly meetings. The rational for using these technologies include reduction in travel cost (in particular air travel), release of employee time (hanging around airport lounges), and decrease in CO_2 emissions.

The main video conferencing project is Live Meeting which has been installed at most employees' desktops or portable computers for a couple of years but is not yet frequently used. Frequently used by some employees but not used by the majority of employees in Nordea.

Structure and implementation of Live Meeting project

The Live Meeting project was brought in under the Green IT umbrella by the Green IT manager. However, the objective is to reduce travel, and no savings will be made in the IT budget.

> "One issue with CSR is that they have relatively small amount of money to accomplish what they want to. The budgets are with the operational departments. Therefore they have taken up this Green IT initiative from the IT side, with the Live Meeting task force to gain funds so something will happen more quickly. So to answer your question it comes in a way from the top because they, the CEO, has claimed that we have to make savings and cuts in our travelling. By that he has also left the door open for the employees to chose how to do that. The Live Meeting that we present is one alternative that we, of course, think is very good." (PL Live meeting)

To investigate and support the adoption and use of Live Meeting the Green IT manager announced a position on the intranet and recruited a person who normally works with costumer support in Malmö. The person was not mainly motivated with the green aspects of seeking the assignment.

> "I did not bring in the Green IT as the primary motivator for myself. It was a fun project, I wanted to gain that experience, sort of break out and try something new to do. That it was related to environmental issues was of course a good thing, but not the primary motivator for me personally.
>
> I thought of it more in terms of efficiency. I mean, it makes no sense travelling all around the Nordic countries to have meetings when you can have much the same talk it in two minutes using a camera. I thought of the project more in terms of making the way we work more efficient. Then of course the green effects… as I started to work with it, that part of the work made it even more interesting, but from the beginning my focus was on efficiency." (PL Live meeting)

The Live Meeting project started in the winter of 2010, when Nordea realized that Live Meeting had been installed on all Nordea computers for over two years but was rarely used. The project leader of the Live meeting project began to work on the project in April and the main goals are to get the system up and running and get more employees to use it. Her first task was to familiarize herself with system and to understand how it was used and why it was not used.

Meanwhile, in other parts of Nordea, the system was adopted very fast by some employees:

> It was introduced to me by a former colleague who is also a 'gadget freak'. She was working as assistant to a manager and she immediately became hooked on the service attributes of 'Live meeting' and defined it as the new way of doing meetings in Nordea. It started out as a gadget but turned out to be very useful. But it took a while to convince colleagues about the service and we

learned that things had to be pushed trough from above before colleagues really moved over to using the service. Further, Nordea had to invest in extra hardware to make it work e.g. webcam, headset, etc. and licenses for all users." (Project member)

Based on this initial knowledge, the system was more proactively promoted in combination with increased emphasis on training for the support group. Since it had not been used before, the support group did not even know how the program worked.

"I mean, how can they support other people if they don't know the system themselves. Trying to support the errands that appeared with a program like that was difficult. All those education initiative started in April and May, 2010." (PL Live meeting)

Objectives and impact

The vision of how Live Meeting may influence Nordea's activities is dual. Cutting the number of travels is one part of it, but also enrich communication that else had been mediated by phone calls. Video conferencing as a mean to replace travelling got a boost when travel with plane was suspended during the ash cloud's presence over Europe. Top management, led by the CIO, is also trying to set a good example on the use of Video conferencing to replace some of their physical meetings.

The Live Meeting project evolved in phases, each with an individual objective.

"Our first goal was to map the usage. The next major step was to try it out in a smaller group, which we did by putting out an article on the Internet saying that anyone could join. This article was sent only to the IT department - about 1 500 people. Those employees could freely decide if they wanted join a session - an online meeting of course! - where they could get help getting started. Our next step would be to get somewhat larger audience than the 1 500 and to do more or less the same." (PL Live meeting)

Despite the ash cloud and good example set by the IT steering group, adoption has still been limited. One reason is the still present disbelief in that the technology actually works properly. This is illustrated by the reaction project leader gets when the users actually are trying it out.

"Like: 'It's so cool, they can actually see each other.' It's a 'wow' effect that you are able to use this technology. Most people are actually amazed that it works; that's the main impression: 'Oh, does it work properly, properly enough for Christian Clausen to use it, oh!'." (PL Live meeting)

Once the system is showcased and proved working, managers and staff in the IT department are generally positive to using the system.

"They are very enthusiastic. In the IT department it's often that the manager and the employees are located in different geographical places. There is an obvious situation where the technology can be used. At least the people I have talked to have been very enthusiastic. Since they work with IT in general they are also very open to new IT solutions. I mean, you can compare it to someone that really don't like IT in the first place… […]

In the beginning when I started to map out what I was going to do, I had interviews with a lot of people and when I talked to them they were like: 'Oh, you're going to start this Live Meeting and get it up and running, great! So if I have any question can I turn to you?' They had tried it out themselves, but felt that they would like some kind of support and somewhere to turn if the needed something. They were very enthusiastic in terms of that and also in error reporting. […]

I think it will save some money on travel, time and effort. The way I see the project at the moment is that it is working. We are progressing with people being more curious, asking more questions:

'How can I do this? I have been trying, now I have started to use this.' We've gain some feedback from new users as well as old users saying that this has been improved or: 'Now I know how I can do this' so my, maybe naive perspective is that our goals will be reached eventually. Maybe not exactly 50 % will use it, but in terms of the reduction of travels that we have to do and so on, I think that it will be successful." (PL Live meeting)

The impact on travelling is large in some units.

"We only have one physical meeting per month now… Travel is down by 50% compared with two years ago." (CGIT)

Another opinion from the IT department in Denmark:

Well it is very effective for me, but it is not only about the green IT attributes that comes with the service, it is also the innovative communication platform that enhances my work. For instance sharing desktops, that really cuts down on time spent on meetings with others, when you instantly can share your desktop and get feedback right away." (Project member)

But there are also some issues

"It always comes back to technological issues as the reason for not using the service. But there is also a difference between users. Some are more reluctant than others. For instance, in my competence network there is a huge difference between the Java group and the mainframe group of people, where the latter are traditionally more 'paper-based', less novice - more reluctant. That can be contrasted with the Java-dudes who simply looks up Google for troubleshooting or blog it and they are also the same guys who normally test our new IT stuff, whereas the paper-guys want to see it work before installing it. A cultural difference." (Project member)

In the current stage of the Live Meeting project, the group is discussing how to reach a wider base of users. In doing so the interaction with actual and potential users has changed from reactive to proactive.

"From the beginning it was more like: 'You got a question and we'll answer it for you'. But our goal is to market the product more. When we aren't working within our marketing or communications departments we simply try to talk to the potential uses. If the marketing or communications departments have any ideas, it's of course their area of expertise. Currently the next step leans towards sort of a road show or something where we physically go visit the offices and show what we can do. The overall main objective in the end is of course to get this up and running for all employees and to have support, help, and error reporting working so that we ourselves are expendable to the process." (PL Live meeting)

"Yes, I would say that green-thinking is one of the drivers for collaboration tools and use of collaboration tools. At the same time they are representing Green IT, these tools are representing the kind of IT-solutions which is enabling that people can change behaviour. Like traveling. Thereby they are reducing the CO_2 emission and other kind of emissions. " (CIO)

Green IT systems

As the third example of how Nordea use Green IT, we present the Facility management system. Both the Power off-project and the Video conferencing/Live meeting-projects aimed at reducing the resource consumption. Organizationally, these projects reside with the Green IT group. The Facility management system, use IT to provide information about how the organization work, and in doing so

opens up possibilities for resource management. The green aspects of facility management are embedded into general facility management, and reside with the Premises department.

Well before Christian Clausen started as CEO and CSR become part of the organizational structure, Nordea was working with energy and resource optimization in their properties.

> "The structure was established back in the spring of 2008, but since the birth of Nordea we've always had Energy initiatives for our buildings. We have even been awarded in Finland for constructing environment-friendly buildings for our offices. So the energy theme has been around and is now part of the eco-footprint umbrella. Then we have established two paper groups, one for external papers and one for internal paper consumption. It is a huge amount of money in this area. Mandatory documents are by law required to be printed. These teams are working on how to change the practice and laws. Some legislation is local and other is EU law." (Premises manager)

To monitor resource consumption in the Nordea facilities, Nordea has implemented a Facility management system.

> "We have IT software that we use for allocating space usage and costs for the whole Nordea unit. We have 60.000 work places in the system. This allows us to calculate the specific work unit's eco footprint. We are adding travel information and energy usage of the building depending on how much space the units are using. So we press the work units to reduce the space usage, in that way their impact on the environment is decreasing. We have the travel monitoring module open so that all the controllers of the units can go to the system and see how much they have been traveling and their eco footprint – though only few are using this opportunity. […]
>
> We have used the system during these years for the premises in the Nordic countries. We need the data about energy consumption. That data should come from Bergen Energy who is our energy provider, but it is not going so good at the moment. In Nordea we have about 1500 locations in the Nordic countries and we also have premises where the landlord is paying all the bills so it is difficult to examine our energy consumption. However, we are trying to calculate the right level of energy consumption on all our premises and this data is uploaded to our optimized environmental tool, which is then making the calculation of carbon emission in the building. When we also know the utilized space we can calculate the emission unit per space." (Premises manager)

Being able to monitor energy consumption is an eye-opener.

> "I think one of our eye-openers has been when we were able to monitor our electricity consumption. We noticed that our buildings consumes equal amount energy when people are not there as when they are there. It's great when IT systems can provide us with this information. So I think information is the key, we have to measure and compare the trends and act thereafter." (Premises manager)

Nordea recognize the value of the information, but has not decided on what to do with it.

> "I think the biggest challenge is to collect the data we need. We focus on how to optimize this process. But when we have the data collected, we can of course think about how to utilise and take benefits from this. To measure carbon emission from electricity is also difficult because we only use certified green electricity, but our aim is to get the consumption down 15% by 2015. So we are going in the right direction. […]
>
> We have discussed whether there should be a positive or negative punishment, but up until now we have nothing. We have presented some environmental goals by 2016, which is reduction by

50% energy usage by person, 50% for customer paper, and 50% by internal printing - "GEM" have set these target and we are working to achieve these goals. It is very difficult, e.g. reducing energy consumption by 50% in an existing building – it's easy when you are building new ones. We are following up the energy consumption every quarter." (Premises manager)

However, there seems to be potential for using the data more effectively in the future.

> "The business units and controllers that are receiving the data are not paying so much attention to it yet, I think. However, during this winter, they have been trying to figure out how they can improve the presentations of the energy consumption.. They take the data from the system and make it into presentations, which are given to the business units. Of course the unit heads only waits to see if they approve our proposal, if we propose them to sit in a new way not using so much space. Another big item on our agenda is to make use of desk-sharing because we have a lot of empty workspaces.
>
> We made a survey in summer 2008 where we monitored 16.000 workspaces during two weeks. We had students walking around in every building monitoring the empty spaces – so we have that kind of snapshot. When we have analysed the data, we talk to the head of the worst units. We have had good and bad results – some are listening others are not. We don't have the support in relation to desk-sharing; it has always been such that the business heads have responsibility of the business and if they think that their people need individual desks, then they will have it. We analyse the data and show it to the responsible also with regard to the travel data. We collected data even before the Eco-footprint program because we wanted to implement desk-sharing." (Premises manager)
>
> "For us working with communication, it's great if we can measure things… I believe it could change behaviour internally if it became more concrete regarding what actions are leading to. I ask for numbers sometimes to communicate facts in the internal articles. Sometimes it's easy to get hold of and sometimes it isn't. But it gives a lot more credibility if you can refer to facts and figures." (GITC)

Conflicting goals and Green IT projects

Interestingly Green IT projects can have different goals, such decrease of energy consumption or better resource utilization, meaning that two projects may focus on the same technology but in very different ways:

> "Of course the transition and problems are related to the fact that there is different ways of how to develop things in this area. I know that we have had two projects that have been competing a bit against each other. I think that we had two projects that used different angles on solving an issue which is related to the green. We had one project where we discovered that people were turning of their PC's at night. One project approach this by turning off the computers at night. At the same time we had a second project where they actually made the utilization level for these workstations much higher by implementing grid-computing functionality so that the idle computers' computing power during night. In this way the solved the problem in two distinct ways. I think the both were addressing with same issue on how to optimize the energy consumption and I think they both worked very well, but there were some disturbance when there were competing projects with different approaches." (CIO)

Process drivers and barriers

This part of the report is fundamentally analytical. Based on our investigations we try to outline why the transition process has been shaped the way it is. We identify external and internal drivers, and how the process has unfolded as organizational hurdles has been dissolved.

External and internal pressure

External pressure on banks with negative environmental impact

External pressure pushing the greening process forward comes from three external stakeholders: customers, future employees, and owners. What stakeholders think about Nordea is investigated by the annual stakeholder analysis.

> "We do the stakeholder dialogue in three ways; we do a web-based stakeholder dialogue with all the stakeholders, other than customers and employees, and then we separately do a customer satisfaction survey in which we ask about CSR-related issues. Then we do an employee-satisfaction survey, were we cover the employees. […]
>
> We send the survey to all of our customers by e-mail or by mail. The response rate is rather good. The reason for why it is done so extensively is that the analysis is made at branch-level, so even the branch get viable information about their customers. It is an extensive exercise, but something we find very useful since it goes to the very floor level to each and every branch." (CSR manager)

Partly through the stakeholder analysis, Nordea believes to have a rough picture of how the customers value Nordea's greening process:

> "We have been doing some stakeholder analysis lately; we have found out that our customers are not primarily interested in our CO2 footprint – they take it for granted. They expect us to do sustainable banking, investments, lending, etc. but at the same time, they expect us to do what I call the qualifying issue; the way we behave, the CO2 emissions, equality issues, anti-money laundering… All these basic things they expect is done automatically, but it is not the things they want to hear about. " (CSR manager)

CSR issues also seem to be high on the potential employees' agenda:

> "Nordea gets feedback via the Human Resource department. We have people responsible for employer branding, and we do active work in all of our countries to especially target certain groups of students, where we feel we want to be amongst the top brands they would like to work for. Whenever discussing with this group, it comes very alive on the agenda; they really want to know about our sustainability work, they want to know what sort of a bank Nordea is CSR-wise. Likewise, in my position I do receive questions and mails to be responded, and there is a tendency for the younger generation to be very interested in the CSR. I also volunteered last summer to be the speaker at the Nordea day for the incoming summer internships. I talked to some 450 in Finland, and I collected some feedback afterwards. In my speech I have to go through information about Nordea corporation and performance, as well CSR. And for the majority of feedback, the request was to including more of our CSR activity. So, the first time I spoke about sustainability for 10 min and the next time for 30 min. Last time I spoke for about one hour and still they wanted more. " (CSR manager)

Similar thought are expressed by the Premises manager:

"An interesting new pressure on Nordea was that during 2008 new employees or candidates to be hired in Nordea was asking about our environmental program. Recall that Nordea hired around 2000 people during 2007/08, so there were a lot of newcomers that had interest in these questions. Maybe it was a trend from the new generation, because when I was young, nobody thought of these questions when applying a job." (Premises manager)

Besides clients and potential employees, the fact that the Swedish state is one of the largest owners puts pressure on Nordea to be a good example. Eventually any actions by Nordea that are seen as unethical or not responsible will strike back on the politicians that are sensitive to public opinion. A company like Nordea has to live with closer investigation from media than its competitors due to the owner situation.

"I think a contributing part - not the whole explanation – is that we are owned largely by the government and the government has of course a requirement to be environmentally friendly. Consequently also we, since we are owned by them. I think part of it comes from there. If you have a public owner, you have to manage your business in an ethical and environmentally sound manner. " (GITC)

The external pressures on Nordea to go green reflect general trends in the Nordic countries. Although environmental awareness is prevalent since long in the Nordic countries, the last few years have seen an undisputable rise in concerns and public pressure.

Nordea today is profitable and generally healthy. One or two decades ago the situation was very different. Previous research has shown that the status of an organization is influencing how the public regards the organizations environmental responsibility. In short, an organization fighting for its survival can get away with doing a minimum of responsible business, while a highly profitable organization is judge by a completely different set of standards. As Nordea has evolved as business organization, the standards by which is business is judged have also evolved. Together with the general increase of environmental concern, these two processes have together added to an increasing external demand for Nordea to become greener.

Internal pressure from employees

If returning back to the years before Nordea got its CSR and Green IT structures in place, many employees were already back then pursuing initiatives to improve Nordea's ecological sustainability and at the same time improve the business of Nordea. In addition, the people we have talked to that today work in with tasks related to the eco-footprint initiative says that they would have liked doing this work also before, but there were then no opportunities to do so.

Some people are more interested in Nordea going green than others. One person that can exemplify the supporters is a user, who works for one the Nordea branch in the UK.

"I have a Bachelor's degree in biology with geology, so science but not one of the strict mathematical sciences. And then you ask about my social engagement, well that is of course a very vague thing to discuss. I would say that I'm concerned for the general improvements of mankind, but I don't go out of my way to do something hugely serious about it. I got involved in the Green project for the London branch because people where aware of my interest, my knowledge and so on. The whole thing has been internal here, but where there has been any impact on interest of costumers, the costumers have been very receptive of the idea. […]

My knowledge about sustainability is based on life experience; both from work and elsewhere. You can't remove someone's personal background from their work or vice versa so … my Green knowledge is based on my personal life. I wonder if I was asked because I have probably the "greenest" house of anyone working here. I have solar panels for hot water, solar panels for electricity and heat recovery ventilation system… that's not what you normally find in a UK house. […]

Then I run into Green IT simply because I was looking through 'greenness' in the whole branch and found that a large part of had to do with IT in some form. IT came up to be a major consumer, so Green IT came about as a bi-product of the Green branch initiative.

IT is semi-independent [at the UK branch], so we were not involved in the original Nordea green project. It was IT staff here raising the issue… and when the whole thing was raised with the General Manager for the branch he was in favour. The trouble was that the people who raised the question couldn't really find the solution. They had an idea what they would like, but they didn't have the knowledge or the skills to either do it or find out what needed to be done and I was asked as well to take part. […]

The General Manager here is a Norwegian and Norwegians, compared to Brits, have a predisposition towards green issues, I think. Having read some of the issues on the Intranet, he was interested and also aware of the green process in the rest of Nordea, and I think he was hoping for… two things; reduced overheads and perhaps even most useful for him; staff motivation. If the staff have an idea which is going to make things better in one way or another and stand right there prepared to make an effort on it, who is it to stand in their way?" (User)

While the user might be an exception in the way he take initiatives and shares his ideas, it should come as no surprise to anyone that many Nordea employees see things in their daily activities that they think could be done more environmentally friendly. In cases this becomes an explicit and formulated pressure, but probably more frequently a latent pressure that can be activated by the right catalysing actions and structures. The green campaign to collect ideas from Nordea employees was an example of a campaign that could activate this internal pressure.

Nordea stress that environmental and economic concern does not have to been regarded in opposition. Rather, they normally go hand in hand.

"The focus on global warming and the COP-15 conference in Copenhagen almost became a problem to us. Everyone thought that we did the environmental action we did only to show off. Now it's easier to focus on the real benefit. The fact that we can't over consume and compromise the possibilities for future generations still stands, regardless what one might think of the global warming. And what still is true is that the environmental and economic sides are possible to combine. We don't have to choose between one or the other." (CIO)

"Its important to keep remembering that there should be both an economic and environmental side to it. Its' not very difficult though. We have never had any problems in arguing the business case." (GIT manager)

"When communicating theses things, you should not disguise the fact that it is also a cost perspective. When you say reduce the number of travels, it is paired with to reduce cost. It is an incredibly high cost of our trips, so you can imagine both the environmental aspect and the cost side of it." (GITC)

Barriers to transformation

External barriers

As any organization, Nordea exist in a regulatory and legal context that that partly predefines how certain activities should be carried out. The finance sector is heavily regulated compared to many other industries. One of the reasons is to ensure that customers are given appropriate information to understand consequences of decisions and choices they make. National and EU-legislation regulate how this information should be shared to customers, and normally the stipulated mean of communication is through paper documents.

In times when environmental issues receive increased public attention and public awareness increase, one could think that the requirements to produce paper documents decrease, but this is not always the case. The project leader from the Live meeting project illustrates this:

> "A key event that has affected my work in the contact centre was an EU law that they passed on, on advising situations. If I give a costumer an advice how to place his or hers money, then there is a whole new setup of rules on how I'm allowed to give advice that… what documents I have to present to the customer. There are tons of papers that we have to fill out, send to the costumers, and also put into our archive. It's information about the product in a much broader sense than before. We have a yearly update on this; you need a license to be able to talk about, for instance, savings and you need to update that yearly. That affects our job a lot - what you can say and in what way. The requirements to provide the customers with paper documents protects the costumer in a very good way, but it has also very much affected how I do my job" (PL Live meeting)

That there are legal constraints to what Nordea actually can do has been noticed. Potentially the barrier can be overcome in two different ways. Either by finding a way to work around the legislation, or by influencing legislators to change constraining legislation.

> "We have established two paper groups, one for external papers and one for internal paper consumption. It is a huge amount of money in this area. It's mandatory by law to print some documents on paper. These teams are working on how to change the laws (some local, other EU law). […]
>
> I know the question of chancing legislation has been raised. I have raised the question to the teams whether we could scale down the A4 paper to A10 paper or duplex printing. And I know that these teams have been able to reduce the paper consumption." (Eco-footprint manager)

Old paper habits

Paper use is one major source of resource use that could be eliminated with the use of IT. External factors doubtlessly hamper some adoption, but that is not the whole story. Partly the problem is tradition and habits, within Nordea itself but also in the interaction with customers.

> "No, I don't think that the law (EU law) stipulates that we need to share it [customer documents] on paper, because our copy we save in the bank is saved electronically. We have to make sure that the costumer gets the info and the only way at the moment is on a paper." (PL Live meeting)

The two paper reduction teams do not only work with legal constraints but also with Nordea processes in general. One way of reducing the use of paper is with increased use of the Internet bank. The question then is what motivation to use; stick or carrot. Today Nordea charge extra for account

statements on physical paper. Approximately 5 – 10% still are prepared to actually pay for the paper documents.

The problem is not only manifested in the unnecessary use of paper documents, but also in the slow adoption of Live Meeting technology for video meetings.

> "So what is the big jump? You use e-mail, you use Communicator, then… what's the big jump from the existing technologies to the video conference technology? What is the barrier? Because I don't see the substantial change in the way people use them. What prevents someone to say: 'Okay, let me have a quick conference with this person and settle …'.
>
> Some users blame their equipment: 'I don't have a camera, I don't have a headset, I don't have blablabla…', but since a few years back most employees have computers with webcams and microphones that work perfectly fine. That is one objective. Then some people are uncomfortable being on video, I don't really know why, but it's probably partly because they are not used to it." (PL Live meeting)

Lack of structures to canalize grass root initiatives

One barrier that seems to largely have been overcome in the last few years is the previous lack of structures to canalize grass root initiatives. As previously explained above, we noted that well before CSR and Green IT became a formalized structure within Nordea, individual employees tried to pursue environmental initiatives with mixed results. The Premises manager was able to start a number of initiatives that could lower the environmental impact and improve business at the same time. Other employees described that ideas they had already a few years ago were then not possible to implement, since Nordea as organization was busy trying to make the many mergers work. Yet others described that they simply did not know where to turn to with their ideas a few years ago.

Putting in place CSR and Green IT structures has been, and still is, a maturity process. In 2010 most employees are aware of the work with CSR and that ideas of how to reduce Nordea's environmental impact are welcome.

> "What is more important and very clear is the whole mindset of the employees have changed during 2009. They have realized that there is this green activity and sending proposals so there is also a pressure from normal employees. We also receive proposals for outside Nordic countries. ". (Premises manager)

The CRS structure and the Green IT manager have become channels to put forward ideas. As the IT developer describes it:

> "I only contact the Green IT manager. I know exactly where to go with my ideas." (IT developer)

This is a natural part of the continuous maturity process. Ideas that at the moment not are possible to implement, technically, organizationally and/or cost efficient, may in the future be just right. There is also work to set up structures to take care of incomplete or more visionary ideas that the originator herself do not know how to implement or finance.

> "Some suggestions have been delayed, but I don't think we have stopped anything were there was a business case for it. But one also have to understand that in a company like Nordea, where we have had very strict cost management, there are people thinking perhaps they won't get money to the project and therefore choose not to propose. We have tried to change that mindset. Whatever project you might have, please come forward, then we will decide how to collect the money. I

don't know any projects that have been stopped due to this. We have some projects we have delayed due to certain circumstances, for instance, shutting down all lights in a building can easily be done in some buildings, but is very difficult in others. But we have not stopped anything, we just have delayed it." (Premises manager)

Besides the formal structure there are informal roots to get things done. One of the users from UK explains:

"I'm still a member of the British Computer Society and it's through them I was became aware of the Green IT… The IT Manager is also a member, so he gets the same publications that I do so he would have seen these things… We have had a few brief conversations on the subject, when we bumped into each other in the corridor perhaps or getting something to drink in the kitchen, so there is no formal agreement between us following a Green path. Most of the work that I've done myself on making the London branch greener has been for workstations." (User)

Rewarding green

Rewarding and measuring green activities and behaviour are essential activities to make a sustainable change. As one of the project members explains, measurements are of high importance:

"We see it as a whole other world if it is out of our measures. That's in fact also why I did not include this [green] measure in my communication." (Project member)

So, to change, for instance, the current travelling behaviour requires a new set of measurements:

"Every day Nordea employees do 500 travels with aircrafts. Of these 400 are for meetings, workshops, and other internal reasons. Only about 100 are to meet with customers. The 100 externally motivated flights might be a bit hard to reduce, but the 400 internal can to a large extent be substituted by technology enhanced meetings" (GIT manager)

There are several approaches to this, as The CSR manager explains:

"We discuss a lot whether to use the carrot or the stick to motivate people… probably we need both." (CSR manager)

However, at present there are no green Key Performance Indicators (KPIs), expect for those employees working directly with green projects. Consequently, there is limited impact on individual or office level. There is an on-going discussion about new KPIs that include green measures, but this is a delicate process.

"We are thinking about different ways to do this. KPI on office and/or employee level related to sustainability for example. But this we couldn't have done initially. We had to reach a level of trust both for the CSR in general, but also for the specific Green IT initiatives. Now that we have reached this stage were management and employees see that what we have done works and have positive impact on the organization… now it's possible for us to suggest more profound changes. The KPI thing wouldn't have been possible before we reached this stage of trust." (GIT manager)

The importance of rewarding and thereby developing new KPIs are stressed by one of the project members:

"In order to persuade the management, the "green project" has to make sense on the bottom line – money vise, or else it won't be perceived useful. But I don't think the consciousness about the environment will be appreciated much – how would they measure it using KPI's? I saw a business case the other day from a colleague, where she had calculated 'money saved' in time, travel costs,

etc. as result of implementing 'Live meeting communication' – this is something the management can understand." (Project member)

Besides the formal rewarding system there are other rewards attached to work with Green IT. One of the IT developers explains:

"It feels like it's easier to get resources and free up time ... or maybe not resources, but it feels easier to free up money … I think it seems that people think: "Oh, what fun!" They want to hear what you do and what it means and things like that. People are curious about what we really are doing." (IT developer)

The chairman of Green IT committee gives a similar view.

"At the present time we don't have an staff incentive system for working with Green IT or Green tasks, except for those that are directly involved in the projects. We are not so good in providing incentives for this. There are no specific KPIs for this yet, but we are heading there. The involved people are very self-motivated and the work with Green IT makes them feel good and when 34000 co-workers are working towards the same end – it makes a difference." (CGIT)

Lack of green competences

Until now the greening process of Nordea has largely been an internal innovation process where the employees of Nordea have contributed with their knowledge and ideas. There are ties to external networks concerned with ecological issues and sustainable business, but our assessment of the actions that are being implemented is that they primarily come from experiences made within Nordea. The CSR manager was an internal candidate with good understanding of the banking business rather than primarily rooted in ecological or sustainability areas. Similarly, other individuals that have emerged as prominent for the greening process have their background from within Nordea. The internal innovation character of the transformation is natural, given that Nordea is in the forefront of ecological work within the finance industry. There is not a large pool of examples or experiences from other organizations to draw upon.

The internal character has both positive and negative aspects. Positively is, as described by Tim Gilbert, the feeling of participation and motivation of staff. Employees we have talked to describe a great satisfaction of being part of and contributing to the greening process. For employees who are personally motivated to search sustainable business opportunities it is, of course, a great contentment to find that Nordea is receptive to their ideas. It is also our interpretation that employees not directly involved with the green activities note what is going on with a sense of pride and feeling that Nordea is an organization to which they can be committed. In addition, the internal character has resulted in that actions and initiatives are being implemented with a great understanding of Nordea as organization. It is not a transition process that is forces upon the organization and upsets the employees by drastically influencing the daily activities. Rather people involved in the greening process shows a tactile understanding of how changes will be received, how they should be communicated, and which changes the organization is ready for.

On the negative side of the internal innovation character is the lack of experience from driving green projects.

"I think here in Nordea we got many 'green thinking' people. People who have the mindset, but many times they do not have experience of this kind of work. They do not have the competences

to do it. In relation to my position where I have the mandate to hire people in this area, I look for people that have such competences and are adding value by also having the knowledge. […]

Finding a person that could coach and follow-up all of these things - we have external consultants doing that, but it should be someone from inside Nordea doing this. Someone who is very active in helping the teams direct their work and activities to the right areas. All the team members have their normal jobs, which they are skilled in, but they don't have knowledge about the sustainability in these areas. If we had the right person with the right network connected to knowledge sources then this person could be sparring partner to the team leaders. Then we will be able to activate the teams much better than today – it's not only about communication it is about sparring with the teams so they can work more effective. Also while the teams are dealing with their daily job tasks, this person should support them in finding possibilities and information. It has to be a person that not only has the good will but also the knowledge." (Premises manager)

The lack of competence is a remaining barrier to overcome if Nordea should take the greening process further. Building the competence completely internally is great from a participatory perspective, but likely drawing on external experiences could enrich the process leading to more substantial results with the resources at hand.

Analysis

This section summarizes how the greening process of Nordea has evolved from a Green IT perspective.

The transformation process unfolded

Four phases of transformation

Somewhat simplified, one can describe the greening processes of Nordea and the use of Green IT as a four-phased process: New corporate values, Establishment of CSR structure, Green IT projects, and Green trough IT (Figure 1).

The process can be said to have started at the time of Christian Clausen being hired as CEO. One of the concrete actions by Clausen was to introduce new corporate values to guide the organization. This was done verbally with establishing three key phrases, but also by in action making decisions that redirected strategic focus.

As a consequence of the new corporate values, a CSR structure was formalized. In the CSR structure we include the hiring of a CSR manager, issuing of yearly CSR reports, hiring a Green IT managers, and launching a green campaign. Some new and some pre-existing projects aimed at ecological sustainability were gathered under the Eco-footprint umbrella. This partly overcame one of the initial barriers to Green IT use – the lack of structure to canalize bottom up initiatives. It should be recognized that more still can be done in enabling bottom-up initiatives and that it even before formalization of CSR was possible to pursue some Green IT initiatives. Nevertheless, with the formalized structure pathways become clearer and smoother.
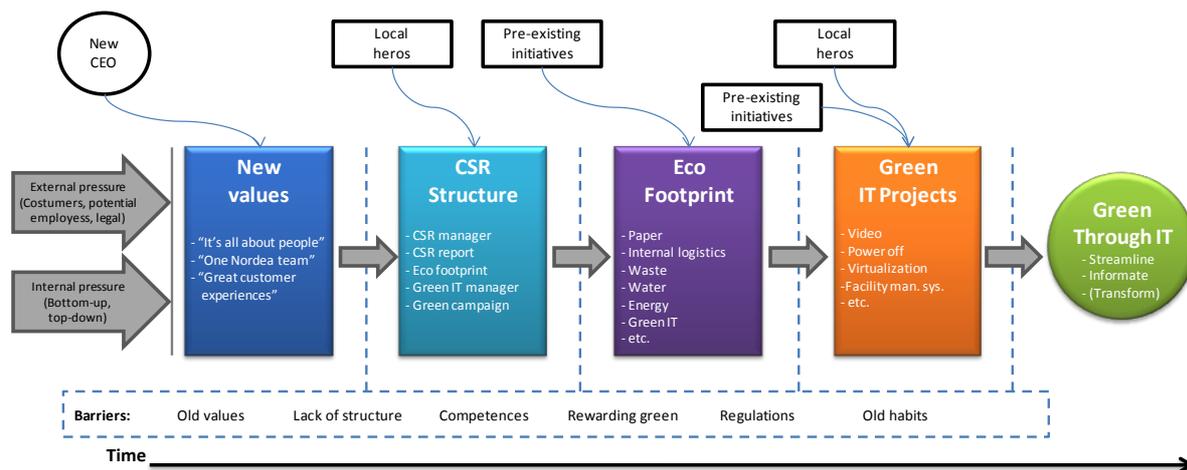
Figure 1. The greening processes of Nordea and the use of Green IT.

Green IT projects were to some degree already present before the formalized structure was in place, but gained momentum after the formalization. Barriers to overcome here is the competence barrier, which can be overcome either by internal learning or by attracting external competence. Nordea has come a long way with the internal learning process, but the barrier to of finding external competence is more problematic due to the lack of candidates with both knowledge of sustainability and understanding of organizations such as Nordea. Yet another barrier to overcome is the rewarding of green behaviour. KPI's related to greenness are lacking and we see green initiatives more encouraged higher up in the organization than on the office floor.

In implementation of Green IT to achieve business benefits Nordea has to overcome regulatory and habitual barriers. This far Nordea has been successful in the streamlining of existing processes, particularly of "pure IT"-processes. That is, processes that only involve IT itself; cooling of server halls, server virtualization, and power consumption of office computers. Green IT is also used to increase environmental efficiency by reducing paper consumption and communication. To a lesser extent Green IT is also used to informate Nordea of resource consumption. However, this use seems to be on its way. What this far seems to be lacking in the use of Green IT is the transformational aspect of IT, the capacity of IT to support different, more sustainable, ways of doing business.

Top-down and bottom up interference

When getting a glance of our four stages process model that we intended to use as material for discussion the Green IT manager made an immediate remark:

> "In some sense one can say that we have gone through these stages… but actually, in my view it was not that straightforward top-down process. What is particular with the work in CSR and in particular with Green IT is that it originates from several different sources. There is certainly the CSR drive from management, but it attaches to aspirations that come from several different individuals and groups within Nordea. The process certainly goes both ways. It's also a bottom up initiative." (GIT manager)

This is certainly true. The greening process, as we understands it, is not a transformation that is forced upon the organization from top management. On the contrary, it is a smooth and soft process lead by champions and supported by the management team. The transformation has roots in top-management actions and decisions, but these actions and decision are also results from ideas and suggestions from

Nordea employees. We see top-management decision this far as a combination of enabling bottom-up forces and a driving force itself. What has created a momentum in the transformation process is interference between soft forces from many different origins.

The greening process is mainly driven through a bottom-up approach with the engagement of local heroes:

> "If you look for instance at the improvements in our shared services. They are taking care of the common facilities and so on. They also have their own "green hero" who is responsible for everything, he has his own ideas and wants to improve at a higher level. He has been one of the local heroes and initiators. (CIO)

In Figure 2 we outline some of the interaction between different levels of Nordea in the transformation process.
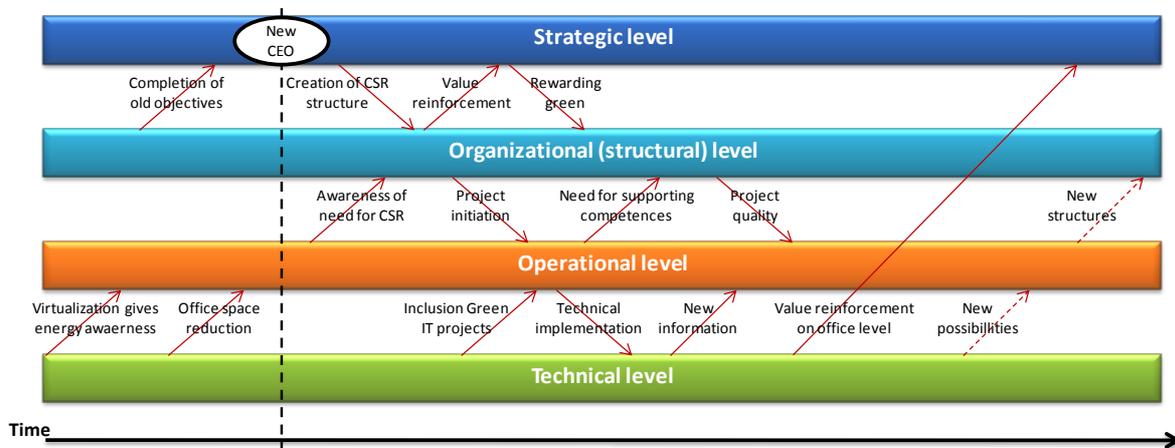

Figure 2. Level interaction in the greening process of Nordea.

Most importantly Figure 2 conveys the interaction between different layers of Nordea that has carried the greening process forward. One top-down flow corresponds roughly to what is depicted in Figure 1: Starting from the upper-left corner with creation of a CSR structure, leads to project initiation, that in turn leads to technical implementation of Green IT. However, the figure depicts that this straightforward view is only a limited part of the picture. Green IT implementations has enabled new ways of working on operational level, and serve as visible carrier at Nordea offices for the importance of sustainable business, thus manifesting corporate norms and values.

Transformation sensitivity

The transformation process described in the previous section has emerged over the past five years, starting with the appointment of the new CEO – Christian Clausen. His way of developing new corporate values based on consensus and discussion within the top management team was a change in management style. This way of getting ideas established is similar to how Green IT and Eco-Footprint has evolved.

So, organizational and behavioural change is never easy – it is a delicate process that requires thought and heart. This is a true picture of Nordea's greening process, which is a gentle and smooth transition with limited top management governance that interferes or disturbs the normal banking business. Instead there are champions, supported by the top management, that initiate and manage the process

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having the corporate values as guiding principles. From the individuals working with the greening of Nordea, we learnt that in a banking context it is necessary manage none-banking initiatives in gentle way, otherwise there is a risk that the greening process might be set back with several years. To describe this process we compare it with the game of curling, where a single grain of sand may stop the curling stone from reaching the nest. Rather than bumping into barriers and seeking to overcome them with brute force, the greening champions ensure that barriers are gone before launching green initiatives. All grains of sand need to be brimmed away. Quite often this means that initiatives are put on hold, waiting for the organization to arrive to a position where the change comes naturally.

In the following two sections we highlight the sensitivity of the greening process and the brimming actions taken to create a more robust environment for the greening process.

Sensitivity

The process to transform Nordea to a greener company is delicate that takes time and needs to be curled. Even thought green activities have been steadily on going since the late 1900s it's a sensitive process. It is a process that has moved forward in small incremental steps starting in facility management and in IT. Those first steps are "not" noticeable in every day work practice, from an employee or customer perspective. If they interfere with banking activities it could lead to backlashes internally, since the general perception is that Nordea is fundamentally a bank and should behave as a bank. The early initiatives were, and still are, driven by champions and motivated by cost savings for running facilities and IT. It is first during the last few years that CO_2 and other environmental aspects are used to motivate such projects.

One such gentle step is the virtualization of servers, which is a typical Green IT project that does not affect any banking activities, but has a large impact on the energy consumption and the CO_2 emission. This kind of project is later used to build trust and recognition within the organization and to external stakeholders for green activities, as well as giving return on investment. It is essential for all green projects to show both bottom line impact as well as environmental impact. Later the virtualization project is expanded to desktop computing, by the introduction of thin computers.

The second project is the power off project which has some minor impact on employees work, such as bending down to turn on the computer or being irritated when coming to a video conference room in the morning and realizing that it takes a few minutes to start up the computer. To broom away these small grains of sand some computers are excluded from the power off projects. Likewise individual computers can be excluded from the power off project if employees require it. This project uses IT to reduce energy consumption. Interestingly, this project was possible after Nordea began to measure and follow up the energy consumption in a systematic manor and found that Nordea was using the same amount of energy at night as during daytime.

Similar small and gentle steps are taken for the Live meeting project that potentially have a huge impact on travel behaviour. First the software is installed on all computers leading to no impact on the employee work. Slowly, some few units begin to use the videoconference system creating an internal push. Later the top management team begins to use videoconference systems to reduce travel. This has a strong symbolic value and cannot be neglected. Furthermore, evaluation project is initiated to understand why the videoconference system is not used and lead to formal training program and promotion of the system. Similar a number of initiatives are taken by the Eco-footprint group to reduce the consumption of resources, including energy, paper, waste, transportation, etc.

Increasing robustness

To make all these initiatives sustainable, Nordea creates structural arrangements to make them more robust. The first and most important one is the change of corporate values that can be used to relate all green projects to. The corporate values are explicitly expressed in the annual report and therefore an important message to the organization and its stakeholders. But more importantly the processes of creating the new corporate values lead to the creation and formalization of the new role as CSR manager.

The CSR mangers and its link to top management in a symbolic act that influence peoples thinking and perception of green and environment. One of the first and more important tasks is the annual CSR report. The process of producing the report requires systematic collection of internal data on energy consumption, which also lead to reflection in the process of writing the report. The CSR report has both internal and external readers. Important is the link to the Carbon Disclosure Projects, were Nordea attempts to influence other companies in reporting on their environmental impact. This is very important to make the world more sustainable. Furthermore, the CSR manager functions as a central node in decision-making and control of various green initiatives.

Formalization is one of the strongest ways to inscribe robustness of CSR and ecological initiatives into an organization. A further step in this direction would be formal KPI's related to ecological issues for some, or all, Nordea employees. Similarly, for IT projects ecological sustainability could be a parameter in project methodologies. Project methodologies explicitly or implicitly models development projects after a set of parameters that are considered as successful project outcome. Including ecological sustainability is a way to ensure that internal development projects take ecological consideration in the future.