DigiNord - Virtual Meetings and Climate Smart Collaboration in the Nordic Countries

Examples of good practice and promotion

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DigiNord is part of the initiative "Nordic Sustainable Cities with focus on climate smart mobility

This report presents the findings, analysis and recommendations of DigiNord; a project for the exchange of knowledge on virtual meetings and climate-smart digital collaboration in and between the Nordic countries. DigiNord is part of the initiative "Nordic Sustainable Cities with focus on climate smart mobility", led by the Swedish Energy Agency and carried out by the Swedish Transport Administration's project REMM (Virtual Meetings in Public Agencies) and Arnfalk Consulting AB. The work was financed by the Nordic Council of Ministers.

The report builds on literature studies, virtual meetings and interviews, a webinar and a virtual workshop, all conducted in 2019. In total 22 cases are presented in this report, with the aim to exemplify and illustrate the multitude of the vibrant virtual meetings activities and projects taking place in the Nordic countries. All the Nordic countries are represented, with examples ranging from ministries, universities, public agencies, NGOs and private companies, as well as committees under the Nordic Council of Ministers.

The findings reveal some common drivers and barriers to virtual meetings, as well as important facilitating factors for their success. The lessons learned throughout the project were synthesised into a number of recommendations, each followed by an explanation of *why*, and *how*. The recommendations are:

- Instruct and encourage public agencies and other public authorities to increase the share of virtual meetings and collaboration.

- Adopt a Meetings and Travel policy including both virtual meetings and business travel, explicitly promoting the use of virtual meetings.

- Get top management support for implementing virtual meetings and make sure that they lead by example - walk the talk.

- Combine working with business travel and virtual meetings: promoting virtual meetings will not substantially reduce business travel volumes unless it is combined with travel restrictions.

- Inform, educate and train employees in how to have good, productive and pleasant virtual meetings.

- Integrate virtual meeting into the organisation's management systems, and the routines for monitoring and reporting the use of virtual meetings.

- Establish a Nordic network on climate-smart virtual meetings and collaboration.

Sammanfattning

I denna rapport presenteras resultaten, analysen och rekommendationerna från DigiNord; ett projekt för utbyte av kunskap om digitala möten och klimatsmart digitalt samarbete inom och mellan de Nordiska länderna. DigiNord är en del av initiativet "Nordiska hållbara städer med fokus på klimatsmart mobilitet", vilket leds av Energimyndigheten och som har genomförts av Trafikverkets projekt REMM (Resfria/Digital möten i Myndigheter) och Arnfalk Consulting AB. Arbetet finansierades av Nordiska ministerrådet.

Rapporten bygger på litteraturstudier, (digitala) möten och intervjuer, ett webbinarium och en virtuell workshop, allt genomfört under 2019. Totalt presenteras 22 fallstudier i denna rapport för att illustrera och ge exempel den omfattande och kraftfulla digitala mötesutvecklingen i Norden. Alla de nordiska länderna är representerade i rapporten, med exempel från ministerier, universitet, myndigheter, frivilligorganisationen och privata företag, samt även från kommittéer under Nordiska ministerrådet.

Resultaten visar på några av de vanligaste drivkrafterna och hindren för digitala möten, samt lyfter fram viktiga faktorer för att de ska lyckas. Lärdomarna från projektet har använts för att ta fram ett antal rekommendationer; var och en följt av en förklaring av varför och hur. Rekommendationerna är:

- Uppmuntra och hjälp myndigheter och andra offentliga organisationer att öka andelen digitala möten och digitalt samarbete.

- Anta en mötes- och resepolicy som inkluderar både digitala möten och affärsresor, och som uttryckligen främjar användningen av digitala möten

- Få ledningens stöd för att implementera digitala möten och se till att de lever som de lär – *walk the talk*.

- Kombinera arbetet med affärsresor och digitala möten: marknadsföring av digitala möten kommer inte att minska affärsresevolymerna väsentligt om det inte kombineras med reserestriktioner.

- Informera, utbilda och träna anställda i att ha bra, produktiva och trevliga digitala möten.

- Integrera digitala möten i organisationens ledningssystem och skapa rutiner för att mäta och rapportera digitala möten.

- Upprätta ett Nordiskt nätverk för klimatsmart digitala möten och samarbete.

> **"**
> *DigiNord är en del av initiativet "Nordiska hållbara städer med fokus på klimatsmart mobilitet*

Introduction

The Nordic countries are forerunners in using virtual meetings and digital collaboration, which can be used as an efficient and cost-effective measure towards more climate smart accessibility and mobility. There are many Nordic initiatives promoting virtual meetings and good practice at national, regional and local levels. What can we learn from these initiatives, and what role can they play in reducing CO_2 emissions from transport in our countries?

This report presents the findings, analysis and recommendations of DigiNord; a project for the exchange of knowledge on virtual meetings and climate-smart digital collaboration in and between the Nordic countries.

The project is part of a three-year initiative called "Nordic Sustainable Cities with focus on climate smart mobility", led by the Swedish Energy Agency and initiated as a part of the presidency of the Nordic Council of Ministers in 2018. The Swedish Transport Administration is responsible for the part on climate-smart transport in cities. The focus is primarily on transport-efficiency, but in this case the focus is on preventing the need for transport through digital accessibility. The DigiNord project was carried out by the Swedish Transport Administration's project REMM (Virtual Meetings in Public Agencies) and Arnfalk Consulting AB. The work has been financed by the Nordic Council of Ministers.

The recommendations provided here are directed both to public and to private organisations in the Nordic countries.

Methodology

The findings in this report build on the information and experiences collected through literature studies, (virtual) meetings, interviews, a webinar and a virtual workshop, all conducted in 2019.

In order to determine which organisations that were of relevance to the project, a literature study was performed. The aim was to identify, contact, and gather information about policies and programmes promoting virtual meetings in the Nordic countries, but also to get an international outlook and benchmark. Based on the findings from the literature review, ten organisations were selected and interviewed. All of the interviews were made using virtual meetings (Zoom) and recorded for documentation.[1]

In order to exchange knowledge, experiences, and to discuss how this know-how can lead to climate-smart action, nine presenters representing all the Nordic countries shared their experiences and discussed their virtual meetings projects in an on-line public webinar held on October 23, 2019. In conjunction with the webinar, an online workshop was held with the presenters from the webinar and a number of additional invited guests. All of the interviews, the webinar and the workshop all worked out successfully, and the total travel budget for the entire project was 0 (zero) kronor!

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1   *Emma Brodén, Ola Mattsson and Linn Möller have made a valuable contribution to this report through their literature studies of virtual meetings in the Nordic countries.*

It should be noted that the cases presented in this report are to be considered as a few illustrative examples, and they do not reflect all the vibrant virtual meetings activities and projects taking place in the Nordic countries.

About Virtual meetings

What are virtual meetings?

By the term virtual meetings we refer to *"meetings and other forms of collaboration held at a distance in real time with the help of digital technology"*. It includes audio-, video- and web conferencing (online meetings or webinars), often complemented with other forms of digital collaboration such as chat, forums, document sharing, etc. Virtual meetings can be a simple conference call over the phone, a Skype video chat on your computer or your smartphone, or a high-end video conference studio with identical room setup, multiple screens, and with life-size representation (virtual presence). All these meetings and collaboration technologies are now increasingly connected, and they are merging together into so-called unified communication. The opportunities to meet and collaborate virtually are rapidly expanding and developing, at an increasingly affordable cost.

The opportunities to meet and collaborate virtually are rapidly expanding

Currently, web conferencing is growing fast and becoming the predominant form of virtual meetings, with majors service providers including Microsoft Skype, Skype for Business and Teams, Cisco Webex, Zoom, GoToMeeting and others.

Benefits and challenges

Virtual meetings can offer an organisation and its employees a number of positive outcomes, if used in a smart and professional way. Potential benefits include:

- *reduced environmental and climate impact:* with reduced travelling;
- *improved collaboration:* it's easier to involve busy and remote participants;
- *higher accessibility:* you are less dependent on time and physical location;
- *better productivity/economy:* reduced travel time and costs, as well as an improved project efficiency;
- *better work-life balance:* you don't have to spend so much travel time away from family and friends;
- *better gender equality:* business travelling is traditionally primarily a male activity, and virtual meetings are more gender equal;
- *strengthen regional development:* virtual meetings can improve access to work, studies, health care etc. in remote areas;
- *emergency preparedness:* meetings can be made possible when travelling is not an option (e.g. during volcano eruptions, disease outbreaks)

However, if virtual meetings just are implemented as a technical tool, without consideration of integrating them into the meeting culture, they run the risk of generating a lot of stress and frustration. They are just used to fill our agendas with back-to-back, poor and uninspiring meetings. Other challenges often lead to that these meetings fail and great frustration is built-up. Such challenges include for instance insufficient and/or unreliable connectivity/bandwidth, incompatible software, firewalls, locked computers and other security issues.

As office employees on average spend about a third (and managers 40–50 %) of their working time in various type of meetings, and these meetings increasingly are partly or fully virtual, it is important that this time is productive, pleasant and sustainable. We need to be concerned about obtaining a healthy, sustainable meeting culture, including virtual meetings.

Climate emission implications of virtual meetings

As suggested in the previous section, virtual meetings can have various implications on the environment and the climate, as well as social and economic impacts, all depending on under what conditions and how they are being used.

Ever since the telephone was invented by Mr Bell in 1876, the potential to substitute business travel has been a subject to great expectations. However, the growing use of virtual meetings and collaboration has been ac-

companied by a parallel increase in travel volumes, including business travel. Research suggests that virtual collaboration, in addition to *substituting* some travel, can both act as a *complement* to meetings requiring travel, and also help generating more travel, as you are able to have a larger number of more distant contacts, which at some point might require a face-to-face meeting. The net travel reduction from replaced travel has been counteracted and outweighed by an increase in travel demand due to economic growth, growing markets, cheaper more available means of travel, etc.

Still, several companies and other organisations have reported substantial reductions in business travel (up 78 %) and have lowered climate emissions, after having promoted an increased and improved use of virtual meetings. A common finding in these organisations is that virtual meetings *do not reduce travel* significantly - *unless* they are accompanied by a determined effort to develop the organisation's meeting and collaboration culture, led and supported by the top management. This also includes more strict acceptance and reporting routines for travel, temporary travel stops as well as cutting business travel budgets.

The digital infrastructure needed to run virtual meetings also have an environmental and climate impact. Studies using life cycle assessment (LCA) to compare the impact of these meetings conclude that unless the equipment is used very seldom and that the alternative means of transport is a train trip, the climate impact of a virtual meeting alternative is only a few percent (or less) of that of a return trip by air or by car.

Virtual meetings in the Nordic countries

Examples of use and promotion

Denmark and Faroe Islands

A small company from the Faroe Islands

[Eysturoyar- og Sandoyartunnilin](#) is a small company responsible for the construction of two subsea tunnels between the Faroe Islands. In order for the construction project to succeed, many actors from different countries have to work together. Due to the remote location of the islands, international collaboration means many long and expensive trips for the parties involved. Two hours of a meeting in real life with a consultant can lead to a three days business trip, resulting in exceptionally high expenses for the project. To tackle the situation, and to reduce the need for travelling, the company started to use virtual meetings frequently, which has saved both time and money. In this case the reduced environmental impact is seen as a welcomed co-benefit. Moreover, while virtual meetings allow the company to execute the construction project faster and with less mistakes, they also provide for more time at home with family, for the people using them.

University of Copenhagen

University of Copenhagen (UC) developed an ambitious strategy [Green Campus](#) 2020 for achieving resource efficiency and sustainability. This strategy allocates an important role to virtual meetings in reaching the target of reducing the growth in CO_2 emissions coming from transport. Approximately 7–9 percent of the UC's carbon emissions comes from air

> *While virtual meetings allow the company to execute the construction project faster and with less mistakes, they also provide for more time at home with family*

travel. The university's 2020 target is a 65 percent reduction of CO2 emissions from energy consumption and work-related transport (including air travel) per employee, relative to 2006.

In January 2020 the rules for travelling were updated as a response to climate change. When researchers at UC are joining conferences or doing field work, they will be forced to consider the climate impact of their journey, and the updated rules lead the employees to consider if it is necessary for them to travel in order to avoid unnecessary impact on the environment. UC employees have to account for why it is not possible for them to participate through virtual solutions such as Skype.

The university recognises that *"a change does require a new culture concerning air travelling. It is necessary for event planners and hosts to prioritise virtual solutions when they are planning conferences and meetings. By enabling virtual participation it is possible to reduce the carbon footprint. Participants can also ask for the option for virtual participation."* They also mention that many universities work on reducing their air travel, and that this can "provide a focus on technical solutions for virtual participation".

Finanssektorens Uddannelsescenter.
Finanssektorens Uddannelsescenter (FU) is a member association owned by Danish financial sector and it provides primarily education and consulting services to the financial sector. The association hosts specific courses and online education about the use of virtual meetings. Even internally FU's employees use virtual meetings to communicate within the organisation and with their clients. FU has trained more than 3 000 financial employees. They have classes with at times more than 100 participants, lasting from one hour up to whole day sessions. FU use the flipped classroom approach. In order to engage the learners they use interactive tools such as Socrative – an innovative way to monitor and evaluate learning with immediate feedback, and Mentimeter – allowing the audience to contribute to a presentation by asking them to answer questions using their mobile phones, and then displaying their answers in real-time.

The main driver for FU and their clients to use virtual meetings are mainly to reduce the amount of travelling and to save time. Their clients also want to offer their customers the convenience to be able to contact them from home. The sustainability is another factor, but not a main incentive.

FU are not aware of any policies, incentive programmes or project promoting the use of virtual meetings in Denmark.

Finland

WWF and Green Office Programme
In Finland, the World Wildlife Fund (WWF) runs an environmental management system called the Green Office Programme. The WWF's programme aims to reduce the carbon footprint of workplaces. One of the seven focus areas of the Green Office Programme is travel. Within this area WWF both encourages and gives specific tips on how organisations can work with virtual meetings. The participant organisations report back on their environmental goals and how they are working with them to WWF every third year.

Copenhagen, Denmark.

> *It is necessary for event planners and hosts to prioritise virtual solutions when they are planning conferences and meetings*

Helsingfors, Finland

The programme works with public authorities, municipalities, universities, companies and other associations. All together in May 2019 the Green Office programme covered 143 organisations including, among others, the Ministry of Environment, Finnish Transport Agency, Finnish customs, and the Tax Administration.

The Finish Customs Office in Pasila
The Finnish Customs office in Pasila joined the WWF's Green Office programme in 2014. The authority has offices and employees all around the country and virtual meetings has helped them to reduce the amount of travel. A reduced need for travel has also led to an increased job satisfaction among the employees. Weekly virtual coffee breaks give employees a sense of togetherness and greater wellbeing. The custom office went further and introduced teleworking, which will allow them to use office space more efficiently, save on heating and cooling as well as improve the work-life balance for the employees.

The Regional State Administrative Agencies of Finland
The Regional State Administrative Agencies of Finland (Aluehallintovirasto) have a division that supports all of the six agencies, with locations distributed throughout the country, with education and training on virtual meetings. The division has developed short and easily accessible training sessions on how to use virtual meetings, both for beginners and for more advanced users. The courses are focused on the personal perspective of the employees and avoid going into technical details of a software. The main idea with the courses is to make virtual meetings seem easy to use as well as something to experiment and play with. The employees need to realise that one doesn't have to be an expert in order to use virtual meeting effectively.

During the training process, the division learned that apart from the courses, it is very important to have a friendly person available internally within the organisation who can support and encourage the employees after the courses to use virtual meetings. The division's recipe for success is to provide short, easy courses, and to be available for people to ask ques-

tions afterwards - even for silly questions. Through working with creating a mindset of using virtual meetings one can create routines and a virtual meeting culture within an organisation.

Aalto University
Aalto University (AU) monitor the amounts of flights that staff at the university takes in their sustainability reports. AU also has extensive guides for the usage of Skype Business, Zoom and Adobe connect on their website to facilitate the use of virtual meetings for both students and staff. The guides instructs how to install the programs but also which one is the best for which types of online meetings. However, when AU presents its sustainability efforts, energy efficiency in building is in focus, and in the sustainable campus recommendations the use of virtual meetings is not mentioned.

Finnish Ministry for Foreign Affairs
The Finnish Ministry for Foreign Affairs has together with WWF Finland developed guidelines for sustainable meetings, which were also tested during the Finland's chairmanship of the Arctic Council. The guidelines suggest that video conferencing should be used when requested by meeting participants.

Iceland

Iceland has several policies in place stimulating the use of virtual meetings. One of them is the Government offices' Climate Policy from April 19, 2019 stating that all ministries have to reduce their greenhouse gas emissions by 40 % before 2030 compared to 2018, and become carbon neutral. Emission reduction is to be achieved, by among other measures, decreasing the amount of flights both within and outside of Iceland by 47 % and 24 % respectively. Virtual meetings are seen as an important tool to reach these goals. The Government offices' action plan, developed as a follow-up to the Climate Policy, aims to make governmental offices good examples of carbon neutrality. Another policy: Iceland the e-nation (2008–2012), describes virtual meetings as a way to reduce both the need for travel and pollution.

According to the Climate law, all ministries, government agencies, state-owned enterprises and municipalities must set a climate policy which shall include defined targets for the reduction of greenhouse gas emissions and carbon offsetting operations as well as actions for these targets to be achieved. The Environment Agency monitors and assists these parties in setting climate policies and it is expected that virtual meetings will play a big role towards emission reductions.

In 2014, Iceland started with Green Steps, a programme initiated and run by the Environment Agency. It focuses on reducing environmental impact from the daily operations of the public sector and includes, among other measures, virtual meetings. In the future, the participation in the programme may become obligatory. All the participating organisations have to submit a Green accounting report, which includes statistics on the air travel but not yet on virtual meetings. The agency is currently working on guidelines for participants in the Green Steps program to report on the number of virtual meetings attended, as well as general guidelines for a successful implementation of virtual meetings, modeled on the Swedish REMM project.

GREEN STEPS AT ICELAND
Currently, 83 public agencies with over 290 offices are registered in the Green Steps programme, but a total of about 170 government agencies are to be found in Iceland. 66 offices have finished all five steps of the programme.

> **"**
> *It can be challenging to have big meetings with some participants being together in one room and some participating virtually*

The Environment Agency

[The Environment Agency](#) has nine offices over Iceland and about 100 employees. It is responsible for the Green Steps programme and participate in it as well. The agency has an international cooperation with many other actors and uses virtual meetings a lot.

The Environment Agency is currently working on a priority guide for decision making on travel. All meetings are considered to be virtual meetings until they must necessarily be changed to a trip and employess must argue for those changes. Is it because virtual presence is not an option or because meeting the partners in person is necessary etc. In addition, employees try to encourage international partners to use virtual meetings as much as possible.

The Agency's experience is that it happens too often that virtual participation is disregarded as an meeting option in international cooperation. Another problem is that employees often encounter the fact that the schedule of meetings abroad is often sent out too late or the subject of the meeting is not what was expected. This means that staff are often flying out to a meeting that they think is necessary to attend, but it turns out that they could have attended virtually instead or simply skipped the meeting altogether.

Also, the Agency has experienced that it can be challenging to have big meetings with some participants being together in one room and some participating virtually. In this case the latter group of people has troubles to follow internal discussions between the participants gathered at one physical location.

The Ministry for the Environment and Natural Resources

[The Ministry for the Environment and Natural Resources](#) is also geographically distributed over Iceland and in order to decrease its environmental impact, they actively work with virtual meetings. The Ministry has the ambition to be a role model for the rest of the country. The organisation is following ISO 14001 on environmental management systems, which guides them on how to improve their environmental work and reduce the impact from traveling. In addition, the Ministry takes part in the Green Steps programme as well.

The Ministry has dedicated employees, working on increasing the use of virtual meetings by providing education and support to their colleagues as well as by developing relevant policies and following up on them. Active support and encouragement from these employees help to overcome the previous negative experience with virtual meetings caused by technical difficulties.

Norway

Norwegian Labour and Welfare Organisation
Norwegian Labour and Welfare Organisation (Arbeids- og velferdsforvalt-ningen or NAV) is a public authority that has been using videoconferences actively since their establishment in 2006. NAV has offices in different parts of Norway and an investment in a virtual meeting solution was done mainly due to practical reasons: to cut down on travel costs and to save time. Each individual NAV unit has additional incentives to use virtual meetings as travel costs affect their budgets and therefore the work that can be done. Virtual meetings are used at NAV for: meetings between the units, external meetings, picture interpretation services for deaf people, translation as well as for intern and extern webinars (e.g. information meetings for employers, conferences).

Just as in the case of the tunnel construction company from Faroe Islands, the reduction of CO_2-emissions was a secondary argument for NAV when deciding for virtual meetings.

Norwegian Environment Agency
Norwegian Environment Agency (Miljødirektoratet) is a public authority with 700 employees. About five years ago, when several agencies all over Norway were merged into one, they started to use virtual meetings as this allowed them to communicate in between different offices without having to travel. They also use virtual meetings for communicating with external partners such as private companies and other environmental agencies in different countries. Virtual meetings are considered as convenient, time-saving and economical. Reduced environmental impact is also one of the drivers to use them.

The Agency's policy is that you should use virtual meetings, mainly video-conferencing, instead of traveling whenever possible. However, virtual meetings are only used for internal meetings between different locations. Guidelines and manuals for virtual meetings are available, as well as some statistics, but the Agency does not monitor the impact of their use.

Starting to use virtual meeting was initially challenging, when the staff needed to learn how to use the software and the equipment. There has also been some communication problems when using videoconference, as it has been harder for the participants to understand each other as compared to when meeting in person. Another experience from adopting virtual meetings is that it becomes harder to say no and not to attend the meeting even if you are sick there is still a possibility to join virtually from home. It is good to have such a possibility; however, it can become stressful for people since they feel a pressure to be accessible all the time.

University of Oslo
University of Oslo has travel recommendations aimed at both their staff and visitors. These recommendations encourage to reflect if the actual trip is needed as well as considering using virtual meetings instead of travelling. They also have a portal for their staff and students with guides and links to video conferences, Microsoft Teams, Google Meet, and Adobe Connect, as well as a bridging system connecting different meeting services.

Bergen, Norway

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It becomes harder to say no and not to attend the meeting even if you are sick there is still a possibility to join virtually from home

Malmö, Sweden

THE TEN STEPS INCLUDED
IN THE REMM METHOD

1. Analyze the point of departure.
2. Get management commitment and resources.
3. Establish a multidisciplinary workgroup.
4. Identify the organization's virtual meetings needs.
5. Map out the technical infrastructure.
6. Select and acquire appropriate virtual meetings equipment.
7. Establish routines and procedures.
8. Appoint designated staff.
9. Inform and sell the idea of virtual meetings.
10. Follow up and visualize.

Norwegian Centre for E-health Research
Norwegian Centre for E-health Research is an example of a platform that shares knowledge about virtual communications within the healthcare sector. The centre is collecting, producing and communicating research about information and communication technologies in Norway in order to find the best e-health solutions. Some interesting articles on virtual meetings published by the centre cover the four trends of the use of videoconferences[1], the use of videoconferences to provide emergency psychiatric care, and situations when videoconferences do not work.

Sweden

REMM
The Swedish Transport Administration (Trafikverket) was commissioned by the Government in 2011 to lead and coordinate the project REMM (Resfria Möten i Myndigheter or Virtual Meetings in Public Agencies), as part of the Swedish Government's "Green IT-agenda". REMM was initiated to support initially 18 public agencies in building capacity for more and better virtual meeting cultures in their organizations. The REMM methodology, based on a ten-step implementation approach, was well received and applied by the agencies. In 2016 an additional 67 agencies are requested by the Swedish Government to increase their share of virtual meetings by applying the REMM-method.

The Swedish REMM-group stresses the importance of training and education, and has offered special training of "super users" and for support personnel in organisations such the Swedish Governmental offices (Regeringskansliet), the Agency for Digital Government (DIGG), the Transport Administration and the UN Environmental Programme.

REMM also offers webinars regularly on topics such as technology, legal issues, security, and meetings culture. The group also offer a type of "virtual café" where visitors can ask any question about virtual meetings, or discuss any related topic. Moreover, a wide range of information and education material is available via remm.se, for the members to use in their own organisations, or for any other organisation using virtual meetings.

The Swedish Environmental Protection Agency
The Swedish Environmental Protection Agency (EPA or Naturvårdsverket) annually collects information from 190 public agencies in Sweden about their environmental performance and summarize the results in a public report. The data collection is part of a mandatory Environmental Management System reporting. Agencies can voluntarily report the number of virtual meetings they have had in a year using this reporting scheme, and in 2018 about 90 agencies provided figures on their use.

The REMM provides guidance on how to collect the data from the conference systems, and also what indicators to use. The data on number of virtual meetings is then used to calculate the share of virtual meetings by relating them to the number of business trips, which also is reported to the EPA. This share of virtual meetings is an indicator of the digital maturity of the business travel culture in the organisation.

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1   Four trends found for video conferencing used in health care: 1. Video to get expert advice/second opinion 2. Video in combination with other (physical) measures 3. Video between the health care system, home and relatives 4. Video for a more efficient administration

In addition to identifying their employees' work-related travel within Sweden as a major source of greenhouse gas emissions, the Swedish EPA is also promoting the use of virtual meetings when being represented in EU-projects (especially meetings in Brussels) and other forms of international collaboration.

The Telia Company
The Swedish telecom company Telia (part of the Swedish-Finnish company Telia Sonera) has since the late 1990s been an avant-garde actor in using and promoting virtual meetings. At that time, their costs for business travel exceeded 35 million Euro annually, a figure the top management wanted to reduce, at the same time as they wanted their employees to walk the talk by utilizing the telecom services that they provided. The company made a strategic move in 2001, shifting from a travel policy to a meeting policy, heavily promoting the internal use of virtual meetings combined with training of personnel in order to develop a new digital meeting culture. The digital development was combined with, from time to time, heavy travel restrictions and travel budget cuts, resulting in substantial reduction in travel volumes, costs and emissions.

The results have been third-party verified and the development process have been subject to numerous research studies.

In Telia, communicating virtually has now become the norm, business travel is the exception. One of the success factors has been to identify who travels (about 5 % of the employees made over 20 one-way trips per month), and to understand why they travel (72 % of the trips for attending company-internal meetings). Knowing this, it has been easier to direct measures and support for this group of employees.

University of Gothenburg
Gothenburg university (GU) has for long time identified business travel as a significant source of environmental and climate impact, and actively used virtual meetings as a means to reduce the impacts. This is outlined in their meeting and travel policy and in the guidelines on how to apply the policy.

GU has used the above-mentioned REMM 10 step method to support the implementation of virtual meetings in the organisation. Some of the many initiatives launched within this work are information session for their staff, and special training and education of university managers in how to host and run successful virtual meetings.

GU use a number of virtual meeting technologies including videoconferencing and Cisco Jabber, Adobe Connect, Zoom, Skype for Business and consumer Skype, and they also have the capacity to bridge/connect different technologies. GU monitors how many virtual meetings they have and report this annually to the Swedish EPA.

The university has an internal climate fund for offsetting carbon emission from air travel. In line with the polluter pays-principle, every air trip is compensated by paying ca 12 Euro to the fund. Environmental and climate project at the university can then apply for money from the fund, and after a selection process a number of them will be granted funding.

RESULTS FROM TELIA'S SHIFT TOWARDS MORE VIRTUAL MEETINGS, 2001 TO 2015

- 61 % less air trips per employee (78 % in total)
- 62 % reduction of travel costs per employee (incl. car, taxi)
- more than 20 million Euro in annual cost savings
- an 85 % reduction of CO_2 in total (until 2013)

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The university has an internal climate fund for offsetting carbon emission from air travel

It is very important to make sure that the technical part of virtual meetings works properly, as well as to provide good training to the participants

With the support of this type of climate funding, GU has tested and succeeded in running a totally virtual academic conference. In order to do so, they developed an open-access virtual conference platform; a platform concept that is openly available for others who wants to conduct such digital conference events.

Nordic Virtual Collaboration

Examples from committees under the Nordic Council of Ministers

The Nordic Council of Ministers has five specialist committees where the main co-operation in specific issues takes place, as well as in the Council's executive body - the Presidium. Here follow examples of co-operation using virtual meetings from two of these committees.

Committee of Senior Officials for the Environment and Climate Committee
Committee of Senior Officials for the Environment and Climate Committee consists of 20 persons from different Nordic countries. The committee has been using virtual meetings for 20 years, starting out with audioconferencing. Currently in between the four annual physical meetings they meet via videoconference. Decreasing air pollution by reducing travel is an important reason for the committee to use virtual meetings.

The experience of the committee is that it is very important to make sure that the technical part of virtual meetings works properly, as well as to provide good training to the participants. Virtual meetings need to be planned well in advance. Their experience is also to avoid virtual meetings that are too long – attending such a meeting for a whole day can be tiresome and demanding. Some challenges with virtual meetings are the time differences between participants attending from different time zones, as well as it can be harder to get the same contact and understanding as when you meet face-to-face.

The committee has considered the possibility to offer streaming of the physical meetings, making it possible for members to take part in meetings at a distance, if they cannot attend in person.

Nordic Social Statistical Committee (NOSOSKO)
Nordic Social Statistical Committee (NOSOSKO) has been using virtual meetings for a long time and keeps using them on a regular basis. The main reason for this is that virtual meetings are saving the Committee time and money, even though the environment aspect is also considered to be important. The committee does not have any official policy concerning virtual meetings as it is common sense to use of this type of meetings, considering how practical they are as the committee members are located in the different Nordic countries.

Just as in the previous example, the experience of NOSOSKO suggests not to have too long virtual meetings as it becomes hard to concentrate, and that the impression is that this type of meetings are characterised by a reduced social connection. The latter can be less of a problem if you already know the people from before.

Technical issues can also contribute to the reduced productivity of virtual communication. This includes both the connection interruptions and echoes. Good equipment suited for virtual meetings is important, sometimes using a laptop is not enough.

The Nordic association of university administrators (NUAS)

The Nordic association of university administrators (NUAS) is a member driven project group aimed at strengthening the collaboration between Nordic universities. It has 125 active members from 65 different universities and university colleges. NUAS also has the Nordic sustainable campus network (NSCN). The aim of this network is to improve the sustainability work within the higher education of the Nordic countries by committing management and stakeholder to the environmental work, sharing best practises and participating in seminars and events. The NSCN uses virtual meetings to communicate every 1-3 months and they actively share good examples of sustainability work which also includes the use of virtual meetings as a way to reduce travel.

NORDUnet

NORDUnet is a collaboration between the National Research and Education Networks in the five Nordic countries. NORDUnet operates a network and e-infrastructure services for the research and educational community. It connects more than 400 research and education institutions with more than 1.2 million users.

Through NORDUnet and via their national network organisations (e.g. SUNET in Sweden), Nordic universities can get access to real-time communication tools such as Zoom and Adobe Connect, and also to live streaming services.

Recommendations

Based on the lessons learnt from the literature studies, through the interviews, the webinar and the workshop in this project, we have identified a number of drivers and barriers to virtual meetings, as well as how to successfully deal with them. The following recommendations stems from these findings, and they are intended to support the implementation of virtual meetings both on a national level, and in individual organisations. Recommendation on how to strengthen virtual collaboration between the Nordic countries as well as meetings internationally are provided as well.

Policies promoting climate smart collaboration

Instruct and encourage public agencies and other public authorities to increase the share of virtual meetings and collaboration.

Why? There are numerous reasons for an increased and improved use of virtual meetings in the public sector, including an improved collaboration within an agency, inter-organisational collaboration between different agencies and with other organisations, including ministries. Virtual meetings offer cost-efficient, time-saving and low-carbon alternatives to business travel and, hence, a sound utilisation of public funds. Moreover, authorities should also constitute a good example for other organisations in society, and inspire them to move towards climate-smart solutions.

How? The Government can, as in Sweden, give direct instructions to public agencies to increase their share of virtual meetings, asking them to work according to an implementation scheme (the REMM method), and to monitor the progress through annual reporting (as part of the environmental management reporting to the Swedish EPA).

Another approach is to engage the agencies in an environmental programme like the Icelandic Environment Agency's "Green Steps" ([Græn skref](#)) programme, with 160 governmental bodies currently participating. Participation in the programme is voluntary but it may become obligatory.

Integrating virtual meetings in the meeting culture

Developing a meeting culture in an organisation where virtual meetings are to replace some co-location meetings requiring travel, is a challenging process with several barriers such as counteracting incentives, routines and attitudes. Promoting and accelerating this process of change requires a determined and systematic approach, not only focusing on the technical and network issues, but also engaging the management of travel, human resources, etc. An example of such systematic approach is the REMM-project's [10-step approach](#).

Adopt a Meetings and Travel policy including both virtual meetings and business travel, explicitly promoting the use of virtual meetings

Why? A policy is a high-level steering document that needs to be approved by the top management, thereby signalling the intention to promote virtual meetings to the organisation. It also creates a foundation for a better coordination between the funding, functions and personnel on one hand associated with travel and (traditional) meetings management, and on the other virtual meetings technology and its administration. For instance, money saved on reduced travel cost can then more easily be invested in good equipment and support for virtual meetings.

How? In order to be implemented and to have any effect (nobody reads the policy!) the policy needs to be accompanied with concrete guidelines; not only for business travel, but also for how and when to use virtual meetings. It also needs to include quantifiable goals and ways to follow up its compliance (see for example Copenhagen University).

Get top management support for implementing virtual meetings and make sure that they lead by example - walk the talk

Why? In order to make any substantial shift in business culture moving more towards virtual communication, it needs to be supported and led by the management. There is also a need to allocate sufficient funds for personnel working with the implementation, for getting good conference equipment suited for the organisation's collaboration requirements, as well as personnel for support and administration.

Moreover, if the management constitutes a good example by using and openly promoting virtual meetings, it sends a strong signal in the organisation and encourages employees to make the effort to change their routines. Ministries also play an important role as roles models which is recognised by e.g. the Icelandic Ministry for the Environment and Natural Resources.

How? A strong incentive for management to support a virtual meeting initiative is by calculating the total costs for business travel, including working time and administration. Another selling point is increased productivity. Employees spend a lot of time in meetings suffering from poor meeting facilitation, and through relatively simple measures these meetings can be improved and become more productive.

It is also common that the management lacks know-how and skills in how to manage and successfully lead virtual meetings. It is therefore advisable to prioritise efforts to inform, train and to educate managers in how to manage virtual meetings well.

Combine working with business travel and virtual meetings: promoting virtual meetings will not substantially reduce business travel volumes unless it is combined with travel restrictions.

Why? There are strong incentives for travelling in business; getting out of the office, meeting business partners face-to-face, travel allowances and not changing a well-established working practice. On the other hand, there is little or no time allocated for employees to study and train how to handle new soft- and hardware required to master the virtual meetings and collaboration. The money and time saved by the organisation by a substituted business trip seldom benefit the employee missing out on the trip: s/he gets to take on more meetings and more work tasks instead.

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Get top management support for implementing virtual meetings and make sure that they lead by example

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Integrate virtual meeting into the organisation's management systems

How? One way is setting up quantified goals for travel cost and/or CO_2-reduction combined with a strategy on how to reach the goal. A temporary travel ban has been proven very effective (as in the case of [Telia AB](#)), as it forces all employees, even the very hesitant ones, to learn how to use the virtual meetings tools. Limiting the number of trips per year (Like Copenhagen University does) is another approach. This helps to lower the barrier to use it again, and to show that it actually can be quite useful and effective.

Inform, educate and train employees in how to have good, productive and pleasant virtual meetings

Why? Considering the amount of time we spend in meetings and the importance of their output, it's surprisingly few that have received any formal training in how to host and manage virtual meetings. Facilitating virtual collaboration in the form of meetings, webinars, and non-synchronous communication requires not only knowledge about how to manage meetings in general. It also requires that you are familiar with the collaboration tool used, and specific know-how on how to work with virtual teams in a way that is both productive and inspiring.

How? An important success factor is good, easy-accessible information and training material, e.g. short instruction videos, available in your local language via your organisation's Intranet (like The Regional State Administrative Agencies of Finland (Aluehallintovirasto), the Swedish EPA and The Swedish Transport Administration does) Make this training mandatory for all employees. Train "superusers" and special supporting personnel who can help and inspire their colleagues (like Gothenburg University has done). Prioritize training of key personnel such as top management, project leaders, and the so-called road warriors - the most frequent travellers in the organisation (like Telia did). Assign a team to develop and manage this type of capacity building in the organization, and create incentives for employees to excel in virtual meetings management.

Integrate virtual meeting into the organisation's management systems, and the routines for monitoring and reporting the use of virtual meetings

Why? Virtual meetings are commonly managed solely as an IT-issue. The task of developing a good and sustainable meeting culture, in which virtual meetings are a natural and integrated part, is not a part of anyone's job description. Hence, there is no way of telling how productive or good the meetings are, or how the participants feel about them. How can we develop and improve something if there is nobody assigned to do the job, and there is no way of monitoring the progress?

How? Working with virtual meetings needs to be integrated into existing management systems, e.g. the ones for quality and environmental issues. This includes using indicators and establishing routines for monitoring and reporting both travelling and use of virtual meetings, enabling a comparison of these two figures. Preferably also monitoring of quality aspects regarding meetings in general and virtual meetings in particular should be performed (see recommendations from WWF in Finland).

Strengthen collaboration - Nordic and international

Establish a Nordic network on climate-smart virtual meetings and collaboration

Why? Many of the challenges surrounding the development of a digital infrastructure and routines for virtual collaboration are very similar in the Nordic countries. The region has a well-developed technical infrastructure, an advanced and successful IT-industry, a high digital maturity with advanced and frequent users. Organisations in both the public and private sectors are to a large extent dependant on well-functioning and seamless digital communication, in which virtual meetings increasingly are an important part. Digital networks and services also offer an improved Nordic integration through simple virtual access to work, getting health care, education, shopping, entertainment etc. in another Nordic country. At the same time, the Nordic countries are relatively small and have limited capacity and "weight" to investigate and stay updated regarding e.g. cyber-security issues, and negotiating agreements with large international IT-corporations.

How? The Nordic countries benefit by co-operating on complex and rapidly developing issues such as IT-security and on-line integrity. Some co-operation is already taking place within the university networks (e.g. NORDUnet). A joint Nordic drive to reduce climate emissions with an increased and improved use of virtual meetings, could start with regular virtual meetings between the environmental ministers, leading by example. When tested and streamlined this should be expanded to more high-level meetings, collaborations and even fully digital Nordic conferences. The Swedish Transport Administration could be a suitable coordinator for such effort, as it has nearly ten years of experience in developing and coordinating the Swedish REMM-project with more than 80 public agencies.

The Nordic countries could also make a joint effort to establish and push for more virtual collaboration in European and international projects. In practice, this could e.g. mean building up studios with equipment and supporting personnel for an increased and improved virtual representation in Brussels (as being promoted by the Swedish EPA and the Swedish Transport Administration).

Concluding remarks

" There is a golden opportunity for this region to strengthen climate smart collaboration both nationally and internationally

It's encouraging to find so many good, inspiring examples of how virtual meetings are used in the Nordic countries, and that virtual collaboration is becoming recognised and used as a tool for climate emissions mitigation. Our study confirms the view of this region as one of the worlds most frequent and advanced users of digital technology, at the same time as Nordic countries have some of the world's most ambitious climate emission goals.

Building on the experiences and methodologies already developed for implementing a more sustainable virtual meetings culture, there is a golden opportunity for this region to strengthen climate smart collaboration both nationally and internationally. Leading by example, we can inspire other countries and companies to do the same.

Interviews

Birna Kolbrún Gísladóttir & Þorbjörg Auður Ævarr Sveinsdóttir (2019-07-01)
Records and quality manager & Project manager
Ministry of Environment and Natural Resources, Iceland

Berglind Ragnarsdóttir
Head of Division/ Specialist Digital Iceland (2019-06-28)
Stafrænt Ísland/ Digital Iceland, Iceland

Claus Godt Hansen (2019-08-23)
Sales and marketing manager
Finanssektorens Uddannelsescenter, Denmark

Harald Höckerstedt (2019-06-25)
IT Specialist
University of Helsinki, Finland

Helena Pulkkinen (2019-05-31)
Project Designer, ATOMI Project, information unit
Administration and development services for the regional state administrative agency, Finland

Hólmfríður Þorsteinsdóttir (2019-06-16)
Adviser
The Environment agency of Iceland and project Green Steps, Iceland

Jóna Guðný Eyjólfsdóttir (2019-07-01)
Special adviser
Ministry of Social Affairs and Nordic Social Statistical Committee (NOSOS-KO), Iceland

Kristian Røste & Rune Salmonsen (2019-06-28)
Senior engineer, IT services & Senior engineer, IT Services
Miljødirektoratet, Norway

Nicolai Mohr Balle (2019-06-28)
Program manager of the national digitisation program
Ministry of Finance, Faroe Islands

Teitur Samuelsen (2019-08-28)
CEO
P/F Eystur- og Sandoyartunlar, Faroe Islands