Title:
Successful Telework and Teleconferencing Experiences in Sweden – developing a web-based service for knowledge and experience sharing

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Conference Theme/Challenge number:
5 Workplace travel

Workshop format:
Preferably seminar workshop

Objective:
With this project we intend to spread the knowledge and experiences that a few companies possess about how to design and manage successful telework and teleconferencing schemes and practices in an organization. By interviewing these organizations and identifying the success factors, this information can be shared to other organizations that have the intention to start or to develop these practices in their own organization. This free of charge information service is particularly targeting public authorities as well as small and medium sized companies (SMEs).

Background

Promoting sustainable development is an overarching ambition of Swedish government policy development. Creating a more environmentally benign transport sector is one of three targets areas within the Swedish sustainable development strategy.[2] The government has commissioned the Swedish Road Administration (SRA) to safeguard the development of a more sustainable road transport system, in cooperation with local and regional authorities. In a government directive of 2002, the SRA was given the task of establishing a national plan for the road transportation system, 2004 - 2015. Part of the plan is a programme to direct transport demand towards travel that is sustainable for both people and the environment. "Sustainable Travel" is the umbrella catch phrase for all work carried out at the SRA to achieve more efficient, and more sustainable human transport in the long term. In a broader context, sustainable travel is a matter of

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[2] Strategiska utmaningar – En vidareutveckling av svensk strategi för hållbar utveckling; Regeringens skrivelse, 2005/06:126

accessibility and can therefore also mean *reduced* traveling, for instance through the use teleworking and teleconferencing[3].

The stimulation of telework and teleconferencing are also approaches included in the Swedish strategy for IT and Sustainable Development,[4] particularly promoting the implementation of these work practices in public authorities from 2007.

Moreover, several Swedish municipalities[5] have identified both telework and teleconferencing as work travel reducing work forms. As part of these municipalities' mobility management efforts, they are informing about and promoting the use of telework and teleconferencing when being in contact with local employers.

However, for those organizations who would like to start to engage or develop these work practices, and would therefore like to learn more and understand what the possible effects are, there is a currently a paucity of easily assessable or reliable information available in Swedish. In-depth information is available in different scientific papers, theses, Swedish Government Official Reports[6] and other reports, a few books, as well as homepages from primarily IT and telecom soft- and hardware companies. Collecting and analyzing this information is a task that requires considerable time and effort, beyond what most organizations have the resources, time, and willingness to do.

This information and knowledge barrier leads to a number of consequences.
- The large majority of organizations, in particular SMEs, lack the insight of potential advantages of telework and teleconferencing, and therefore have no interest in implementing them
- Organizations that are interested in introducing one of the work forms lack the know-how and resources to implement the initiative, and as a consequence, the initiative stalls
- Companies and authorities that do implement telework and/or teleconferencing schemes in their organization often do so suffering from insufficient insight into how to optimize the new work practices to their conditions and to get the most out of them from social, economic and environmental points of view.

Consequently, there is need for an easily accessible source of information about telework and teleconferencing, preferably a, 'one-stop-shopping' information source in Swedish that provides unbiased information to organizations willing to launch or further develop these work forms. Identifying this demand for information, combined with the need to supplement the mobility management toolbox with tools for work related travel, the SRA in cooperation with other authorities, municipalities, universities, and non-governmental organizations, has launched a project called ResFri. Such development has potential

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[3] Teleconferencing is a collective name for audioconferencing, videoconferencing and web-based meetings. Other commonly used terms are virtual meetings or e-meetings.
[4] Ett miljöanpassat informationssamhälle år 2020! - en rapport från IT-politiska strategigruppen; Näringsdepartementet, oktober, 2006.
[5] E.g. Stockholm, Gotenburg, Malmö and Lund.
[6] Statens offentliga utredningar, SOU

positive environmental and safety implications and would contribute a more sustainable development of the transport sector. The tentative name of this information source is *Infokällan*, and we will describe its design and main components in the following section.

Infokällan

Infokällan (translates into *the Information Source* or *the Information Well*) is currently being developed and a draft version can be viewed at www.vv.se/resfri. The contents builds on semi-structured interviews made with industry and authority representatives in Sweden, as well as secondary sources including research publications, books, Internet sources etc. The interviews have provided supplementary information to the existing literature as well as inevitable updating of results and findings. Infokällan covers two rapidly developing technology-based phenomena and therefore needs constant updating. Describing something relying on information and communication technology is like shooting on a running target, but it is mainly the technology descriptions that are in most need of frequent change.

The information service is web-based and offered on the website of the SRA. To maintain an unbiased perspective, the service is intentionally kept free from any advertisement or corporate linkages. The companies interviewed do not include the IT or the telecom sectors, again in order to avoid the risk of that the information could be interpreted as biased.

The main areas being covered are for both telework and teleconferencing (the two presented separately): [7]
- Introduction and explanation of the work form
- Incentives to use the work form
- Success factors and common pitfalls
- Best practice – presentation of good example companies and authorities
- Effects on the organization's economy, social factors, transport and environmental impacts
- Technical and security aspects
- Sources for more information: literature, links to organizations, suppliers of relevant hardware and software, courses and education material.

The material collected in Infokällan is partly based on information gathered from the large number secondary sources available, both national and international. Even though the national sources are few as compared to the abundant international literature, they are valuable in this context as they are more relevant for Swedish conditions, being influenced by national laws, organizational culture, geographical distances, prices, etc.

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[7] The design and main components described here is the current version as of as of mid January when this article is submitted. *Infokällan* is continuously being revised and developed so the one described in May 2007 is likely to differ somewhat from the one presented in this paper.

The other main sources of information are interviews with companies and authorities, all active in Sweden, but also several with international businesses and/or cooperation, and some of them being multinational companies. The interviewed organizations are studied using semi-structured interviews about their set-up of and experiences with the work form. In many cases several persons are interviewed in one organization in order to get a better picture and understanding. These interviews are used to update the secondary sources, collect illustrative best-practice examples and to better understand the success factors for both telework and teleconferencing.

The draft version of infokällan is subject to thorough evaluation and testing during its development and before it will be fully launched. At two different stages in this process it will be critically reviewed and discussed. This will take place in workshops with invited experts and representatives from organizations with extensive experience in telework and teleconferencing. Moreover, infokällan will be tested "live" in a number of organizations, by allowing a few selected companies and authorities to use this information resource when implementing or further developing these work forms.

The project uses the SUMO model[8] to help planning, managing and follow up the ResFri project, and to monitor the actual effects of infokällan on work related travel.

Expected outcomes and preliminary results

What are the expected outcomes of this project? Naturally, it is expected that more Swedish companies, in particular SMEs, and authorities such as state agencies, will initiate and further develop successful telework and teleconferencing schemes in their organizations. This, in turn, will be able to reduce work related travel. Then the question arises: what impact on work related travel can be expected? Tentative results from the organizations interviewed so far indicate that the use of teleconferencing generates a 15 – 20 % overall replacement of their business travel. For telework, the equivalent figure is around a 5 % replacement of the employees' commute travel (in passenger kilometers). The two examples below are extracted from the organizations interviewed and both used as illustrative examples in Infokällan.

On a macro scale the impact of these changes in travel patterns is still minute. However, the interesting aspect of this development is the impact on the micro level – these "mobility management tools" are primarily a strategic move for an organization to improve competitiveness, increase quality of the services provided, attract and keep good personnel, and to keep costs down. The transport and sustainability impacts can be seen as a more of a bonus effect, or a win-win situation. In this way the Infokällan can be seen as a catalyst for a self-perpetuating development which is preferable for several reasons, not the least from a sustainability perspective.

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[8] SUMO – System för Utvärdering av Mobilitetsprojekt (Systems for evaluation of mobility projects); Vägverket Publikation 2004:98, a tool for planning, evaluation and management of a mobility management projects. This tool is increasingly being used by the Swedish Road Administration to facilitate improved routines to follow-up on the effects of different mobility management projects.

Example 1: Vasakronan

Vasakronan is a property company in Sweden with 360 employees, with a business focus on office and retail premises. The company has operations in Stockholm, the Stockholm suburbs, Göteborg, Malmö, Lund and Uppsala.

In order to improve the communications between the different offices in Sweden, Vasakronan uses both audioconferencing and videoconferencing, predominantly audioconferences. They have videoconferencing in three locations in Sweden: in Stockholm, Göteborg and Malmö. Videoconferencing was introduced in year 2002 after pressure was asserted from the regional managers who regularly had to go to Stockholm for meetings. Another strong motive was the environmental impact of the air travel and the potential savings made possible by videoconferencing.

Videoconferencing is commonly used for meetings with members of the board, different councils, steering committees and project meetings. The equipment at the head office in Stockholm is now used 30-40 hours per week. Audio conferencing is used for different operational tasks between the regions, but also with the board. Videoconferencing is used almost exclusively for internal communication, audioconferencing also for external meetings.

Since 2002, business travel has decreased. The use of teleconferencing has been one of the reasons behind why Vasakronan has been able to lower its CO_2 emissions from passenger transport of 40 % during the period 2003-2005. Approx. 18% of business travel has been replaced with teleconferencing during these years.

Two major success factors:
- The cost of using teleconferencing is allocated as overhead. This lowers potential resistance to use (as it's "free" and no administration is involved) but is still economically beneficial for the organization.
- Good support and administration for booking and technical issues

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Example 2. Läkemedelsverket (Medical Products Agency)

The Medical Products Agency (MPA) is the Swedish national authority responsible for regulation and surveillance of the development, manufacturing and sale of drugs and other medicinal products. Approximately 450 people work at the agency; most are pharmacists and doctors. The MPA is located in Uppsala, approx. 70 km north of Stockholm.

Telework was introduced already in 1993 at the agency, and about 60 employees work regularly 1-2 days per week from at home, writing and reading reports and other publications. The work form was introduced to improve working conditions, support a better work-life balance and quality of life for their employees, and thereby making the work place more attractive. The MPA have gradually moved away from more rigid telework regulations and agreements, in favor of now making up more informal agreements between managers and employees. The teleworkers must attend common meetings and seminars every week and thereby get to meet each other and interact. The benefits experienced are mainly better quality of the work produced and that employees are pleased to avoid long commutes often from the Stockholm area. The authority

does not experience much negative impact from the work form as the extent of the telework is relatively limited.

Any detailed follow-up of the travel impact from the teleworkers has not been made, but an estimate is that about 5% of the total commuting from all employees is reduced, equaling 270 000 km/year of saved travel.

Two major success factors:
- Flexibility - always keeping an open attitude towards new solutions
- Using telework for suitable work tasks