Deployment of Telework in European Public Administrations

An Overview

EUROPEAN FOUNDATION
for the Improvement of Living and Working Conditions

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Introduction

The third industrial revolution is intertwined with the growth of the service sector as observed for the OECD countries for the last three decades[1] and characterised by a shift from manufacturing to the processing of digitised information.

Table 1: *Service Employment Trends: Services as % of Total Employment*

	EU 15
1960	39.0
1974	48.0
1984	57.1
1990	61.2
1994	64.2

Source: OECD, Historical Statistics (1996)

In Europe's post-industrial societies that presently share a bias towards a common reduction of state expenditure and liberalisation of markets, 'telework' is one expression for new individual and economic flexibility in work organisation Other expressions for new flexibility are the increased use of digital Information and Communication Technologies (ICT) and the globalised competition of services as well as labour force. Thus, telework serves as a concretion and as a metaphor manifesting and reflecting the following trends:

- ICT-based rationalisation and reorganisation of work;
- structural changes of the labour markets;

[1] For a critical discussion see Preissl, Brigitte (1995), p. 3-6.

- changes in the traditional understanding of occupational status and the continuity/discontinuity of professional careers;
- an erosion of traditional dichotomies such as work time and leisure time, and private and public spheres;
- an individualisation of life-styles and a shift from classical forms of control and subordination towards increased decentralisation, autonomy and self-responsibility in work regimes.

Alongside the phenomena of high rates of unemployment, leisure orientation, unpaid and voluntary work, telework seems to be one of the indicators of an end of the traditional 'working society' as we approach the 21st century.

Publications and statistical data suggest that the deployment of telework in Europe lags behind the USA. Nevertheless, we find the first European practitioners began in the early 1980s and concentrated Community action on research, promotion and funding of telework dating back to 1989.

Despite these many activities which are documented and accompanied by conference papers and publications, telework practice has been mainly observed in the private sector. With the exception of a few outstanding cases, only marginal knowledge has been gathered from the public sector and public administration in particular.

This report is based on a pan-European study undertaken in four and a half months between December 1997 and April 1998 designed as an overview.

The objectives of the study were to:

- identify public administrations as telework practitioners on local, regional and national levels in each of the 15 EU Member States and at EU institutional level;
- assess the teleworking administrations through a catalogue of criteria identifying risks and benefits, hindering and supporting factors to serve as a guide for potential subscribers;
- provide a comparative overview on the state of the art.

The report is divided into four parts:

Part One gives a short introduction into theoretical considerations on the relationship of public administrations, ICT and telework. It finishes with a description of the methodology used for our study. In Part Two, selected case studies from all over Europe are presented in the framework of the respective Member State's policy environment, offering a high diversity among the identified cases and serving as vivid descriptions and illustrations for the overall findings as presented in Part Three. Part Three contains a comparative analysis of the case studies and Part Four serves as an annex for supporting documentation.

Part One

Telework and Public Administations

1.1. Bureaucratic Telework, Tele-cooperation and Tele-control

Definitions for telework differ with the changing backgrounds of regional economic cultures. They relate to the technology in use, the time spent away from the traditional workplace, the place where work is actually conducted, the transfer and the addressee of information, and employment configurations. Further, definitions and classifications are highly dependent on the institutional framework where they are produced.

The current uncertainty about telework definitions[2] is reflected by a weak statistical basis. Still, the most reliable source regarding pan-European telework penetration is the TELDET-survey of 1994 which has provided the basis for many subsequent and less serious speculations and whose authors themselves reveal the critical aspects of the data obtained.[3] On the one hand, the extrapolation of reliable data from five core countries to the other seven remaining EC-countries in 1994 on the basis of geographical proximity regardless of differences of their 'economic development, the existence of government policies in the area and the IT&T infrastructure'[4], as well as a fairly wide definition of telework have been likely to result in a high number of teleworkers.

[2] see i.e. Huuthanen, Pekka (1996), p. 1; for an overview of several definitions see Daniels, Kevin et al. (1997): Defining Telework: What is it exactly? in: Jackson/van der Wielen, p. 177-187.

[3] Korte, W.B./Wynne, R. (1996).

[4] ibid, p. 28.

Table 2: *European Telework Penetration and IT infrastructure (1994)*[5]

Country	Labour force[6]	Teleworkers[7]	% teleworking	% labour force with email	% labour force with B-ISDN
Sweden	3,316,000	125,000*	3.77 %	43.68 %	0.56 %
Finland	2,400,000	60,000*	2.50 %	22.00 %	-
UK	25,630,000	563,182	2.20 %	17.16 %	0.96 %
Ireland	824,000	15,000*	1.40 %	16.30 %	0.14 %
Netherlands	6,561,000	80,000*	1.22 %	26.18 %	0.09 %
France	22,021,000	215,143	0.98 %	6.86 %	4.72 %
Spain	12,458,000	101,571	0.82 %	4.13 %	0.21 %
Portugal	4,509,000	25,107	0.56 %	2.61 %	-
Luxembourg	165,000	832	0.50 %	11.39 %	0.19 %
Belgium	3,770,000	18,044	0.48 %	8.12 %	0.23 %
Italy	21,015,000	96,722	0.46 %	6.86 %	0.07 %
Greece	3,680,000	16,830	0.46 %	2.10 %	-
Germany	36,528,000	149,013	0.41 %	12.99 %	5.05 %
Denmark	2,584,000	9,800*	0.37 %	19.17 %	0.22 %
Austria	3,278,000	8,195*	0.25 %	9.00 %	-
TOTAL EU	148,739,000	1,484,439	1.00 %		

Source: European Commission, DG XIII, Status Report on Telework (1997). All figures and percentage of teleworkers except asterisked figures from the TELDET-survey in 1994. For sources of national estimates, see European Commission, DG XIII (1997).

On the other hand, within the wide scope of definitions a lack of adoption of 'telework' as a concept and slogan in several Member States and regions may have led to lower estimates, as several work practices classified by telework-enthusiasts among researchers in their own countries might simply not be considered in other countries. Informally decentralised and computer-based work, homework, home-based overtime and nomadic work are organised as they have always been, but are nowadays performed with new technical tools. For instance, the quantitative difference between Austria and Finland based on different sources in Table 2 of the percentage of teleworkers among the national work force is likely to reveal not only different realities of telework deployment, but also inconsistency in the classifications of telework.

For our study we defined telework as:
'a way of working using information and communication technology, in which work is carried out independent of location - particularly at a location other than the traditional work place.' [8]

[5] We repeat these data as a frame of reference mainly because of their quasi-official character enhanced by repetition in further publications as Mitchell, Horace (1998) in the European Information Technology Observatory (EITO). A critical discussion for instance would have to consider such facts as the number of 3,278,000 in Austria does not represent 'labour force', but the number of the employed (excluding the self-employed) in 1994.

[6] all data except Austria, Finland, Sweden from Korte, W.B./Wynne, R. (1996).

[7] ibid.

[8] DIPLOMAT, AC 222, 'The European Charter for Telework', http://www.telework-forum.org/diplomat, 1997.

There might be better and more precise definitions and - according to different views - more wishful ones. However, the loose definition we used is valuable in allowing the various factors behind different modes of understanding about the meaning of 'telework' (technology, order of time and place, occupational status) to be identified.

One also has to face a variety of different terms according to different national backgrounds, i.e. 'telework', 'distance work' (Sweden) or 'telecommuting' (USA). Despite of slight differences in the concept, these terms are used synonymously in this report.

There are several categories for the delocalisation of work performance in flexible and ICT-based work understood as telework:

1. Alternating or multi-site teleworking, which is partly based in the office and partly in the home.
2. Tele-homeworking, which is based wholly in the home.
3. Work from telecentres.
4. Mobile or nomadic teleworking.
5. Work from satellite or remote offices.[9]

It is mainly the category of 'satellite and remote offices' which produces analytical problems in the case of public administrations. Here a clear distinction between 'telework' and electronic networking or tele-cooperation can not be easily drawn.

Is the electronic transmission of information from remote office A to the headquarters B to be classified as telework or as the prolongation of a traditional work pattern improved and accelerated by technical means? Which criteria would denote it as telework: the proximity of the remote office to the civil servant's home or flexible working hours or the quantity or quality of the information transferred?

Technological persuasion

However, definitions relate to purposes. Rather more important than the search for strict classifications is the *persuasive character of technological environments*. Together with the growing numbers of PCs and modems in private households, the increasing interoperability between and within public administrations is the provision of the technical means and technical skills for decentralised ICT-based flexible work. 'With distributed and relational databases it no longer matters where an organisation or an administrative layer is located.'[10] Indeed, we currently face an enormous shift towards pan-European electronic tele-cooperation as exemplified by the Schengen Information System (SIS), the inter-connection of data among different bureaucracies on national basis and telematic applications at local level. DG XIII of the European Commission

[9] compare Daniels, Kevin et al. (1997), Huws, Ursula (1997).
[10] Frissen, Paul (1997), p. 115.

runs a program entitled 'Telematics Applications for Administrations' that funds the establishment of electronic networks both within and between administrations in the private and the public sector. Applications range from computer-aided post in Europe in the year 2000[11] to the harmonisation of official statistics and data access throughout the network of European public administrations.[12]

This is a development which favours, on the one hand, the concentration and compilation of data (which seems promising under the aspect of efficiency, but frightening under the aspect of control[13]), and on the other hand, a decentralisation of services and information production.

Seen from such an angle, telework can emerge in the environment of provisions for external data exchange. These are exemplified by public electronic services by the Digital City in Amsterdam, a domain for digital democracy, or by 'Direct Access Government' launched in the UK in November 1997. In the latter case, citizens are able to select, fill out and send forms electronically to the administration via the Internet. 'To some extent inter-organisational connections are outnumbering intra-organisational connections.'[14] Models of integrating external data exchange with internal work procedures and organisational change towards telework can be found, such as prominent cases like the network of the Western Isles Council or the Stockholm City Council's network for healthcare and medical services. The Danish government follows a comprehensive organisational approach with a four-stage 'development ladder' for local authorities to join the public electronic service network. In stage one, the conventional organisation deals with workstations with simple office automation, stage two implies electronic mail for internal and external use, stage three adds incipient use of case processing systems or electronic filing and the 'dynamic organisation' in stage four performs both case processing and electronic scanning and filing of incoming mail.[15]

As our case from Denmark in Part Two will show, such a high level of informatisation and networking favours (still with some difficulties) not only the cyberspace as the space of storage and exchange of documents, but also a decentralisation of the workers. Current plans in Denmark are expected to lead to a virtual public administration of email addresses, whereby the public will interact with an entity beyond the constraints of physical architecture. In such a vision, the 'real' location of the bureaucrats which is behind the electronic addresses will be irrelevant.

[11] Project AD 1001, CAPE 2000 - Computer Aided Post in Europe in the year 2000.
[12] Project AD 1013, RAINBOW - An Object Network for Statisticians and Administrations.
[13] see Frissen, Paul (1997), p. 115.
[14] ibid, p. 113.
[15] Ministry of Research and Information Technology Denmark (1997).

1.2. Socio-historical preconditions for telework in public administrations

From an abstract, ideal and external point of view *public administration is a system whose supposed main destination is the production of political and administrative programs and programmatic decisions to maintain the existence of the social system*.

At first glance one might think that communication technologies and the public administration 'by nature' must be closely intertwined, as public administration's 'primary processes always have been the processing of information and communication.'[16] However, regardless of a lack of standardised reliable transnational data on telework penetration in general, and before beginning with empirical work, publications and our own experience in the field gave evidence that compared with business organisations, Europe's public administrations have been slower and less active in tapping ICT-based new ways of work organisation, among them telework.

A recent survey carried out in France in 1997 by Catral at the national level identified in total 55 civil servants as teleworkers.[17] The 1994 Survey of Decision Makers in Organisations (DMS) carried out by TELDET for the five core countries shows especially low telework penetration in French and Spanish public administrations. The discovery of 7.7% telework practitioners among the Italian administrations is, from our point of view, amazingly high as according to our own field experience and available literature, telework in Italy seems to be in an early stage.[18] Such figures might lead back not only to the difficulties in defining telework, but also in standardising a definition of a 'public administration'. Distinguishing core administration from the wider concept of the 'public sector' can be problematic when it comes to certain institutions (as the administrative part of universities, museums, health care,...), and in different Member States public administration differs regarding the extent and character of its tasks. The difficulties of a quantitative comparison become obvious when considering the UK, where many public services, including their administration, are privatised and outsourced.

Table 3: *Telework Practice among Public Administrations in 1994 (DMS)*

Germany	5.4
France	0
UK	4.4
Italy	7.7
Spain	0

Source: Korte/Wynne(1996:29)

[16] Frissen, Paul (1997), p. 111.
[17] Catral (1997).
[18] With the exception of some cases so rare that they cannot apply to the general situation, no company in Italy so far has been brave enough to introduce teleworking on a large scale and to believe in its potential (...). De Massi, Domenico (1995), p. 5.

Generally, it has to be considered that breakdowns showing the percentage of organisations with teleworkers reveal little about the entire quantity of teleworkers. Cases like the UK, Germany, or Sweden[19] indicate that the existence of telework in public administrations, albeit a marginal phenomenon, is supported by factors such as high standards of available technology, low telecom costs and ICT-strategies on the political agenda. However, these can be supporting, but not sufficient and the only influential factors as illustrated by the case of France, where at least some of these factors apply, and considerable supposed overall telework penetration finds no expression in the public administration. Studies of telework in the past left us with the impression that a remarkable discrepancy between a higher telework deployment in the private sector and relatively few applications in public administrations had also to be expected also in countries such as Austria, Belgium, Finland or Ireland.

We assumed that this had to be seen in the context of the specific nature of the public service and its traditional hierarchical/bureaucratic work organisation. In the majority of the Member States, public administrations so far have been characterised by:

- less exposure to pressure from market mechanisms;
- conservative internal hierarchical organisation;
- a specific emphasis on confidentiality of information;
- the need to publicly justify internal change linked with a general tendency of institutional avoidance of explicit decision making.

In going back to the media revolution of the 19th century, an historical reconstruction reveals that the use of communication technologies by public administrations in most of the European countries has been characterised by several ambiguities. In certain aspects, public administrations have actually been among the most advanced users of new communications. Around the middle of the century, in contrast with the USA, in the majority of European countries (with the exception of the UK) telegraphy became introduced under the monopoly of the state. The new possibility of transferring information with a minimum of time delay and thereby nearly overcoming the distance factor, was accompanied by the expectations of politicians, engineers and high level civil servants to ease central control over imperial territories and their peripheries.

Besides the state and the press (whose control by the authorities differed from country to country), the stock markets were among the first users of the new technologies. By according privileges to the stock markets the state supported the communications aspect of the Industrial Revolution, but at the same time was forced to apply the technologies within the administration to control, monitor, and influence economic developments. For example, the first phase of the new pneumatic dispatch in Vienna in the late 19th century linked ministries with each other, and an exceptional link was made between the Ministry for Trade and the stock market. On the other hand the administration showed patterns of resistance. As a prominent representative of the paradigm of control and discipline in the 19th century, which was based on components like

[19] see Part Three.

spatial allocation, written directives and physical presence, the public administration often lagged behind other societal actors as a telecom practitioner. For instance, the implementation of the telephone in several European ministries was delayed as the higher ranks feared the undermining of traditional hierarchies.

Moreover, information as circulating within and spreading out from public administrations has a particular character. For a certain time a high proportion of the contents of internal communication is labelled as confidential. Communication with the public is 'official' and defined by legislation. This is a banal but nevertheless highly important difference from everyday speech and a high proportion of communication in the private commercial sector.

Taking these aspects into consideration one might conclude roughly that *the public administration in the classical sense has been open for communications as tools of control and has been sceptical towards communications that might have challenged its role as a hierarchical meta-institution securing societal integration.*

Information and communication technologies, as with other machines, are means of rationalisation. 'The ever increasing capacity of ICTs makes small scale a technological option. (...) The huge bureaucratic and hierarchical organisation is no longer necessary from a technological point of view.'[20] Results from the private sector show that distance working, telecommuting or telework carried out via computerised networks can increase individual productivity between 20% and 40%. Assumed reasons are higher motivation in self-chosen work environments, decrease of interruptions at work and hidden overtime. Another efficiency-oriented argument favouring telework is the potential for a reduction of operational cost items (cost of office space and infrastructure, travelling and commuting). Furthermore, the flexibility of place and time as enabled and suggested by telework can imply further organisational changes (outsourcing, downsizing, expansion of services, flattening hierarchies, team and goal oriented workstyle nowadays known as 'Management by Objectives-MBO', the paperless office, etc.).

One of the main characteristics of public administrations is a tendency towards growth. For a long time in many European countries, public administration has been exempt from market mechanisms forcing organisations to technical and organisational innovation. This has gone hand-in-hand with a special employment status of civil servants. Also, in many western democracies, for historical reasons the classic civil servant has been working in a highly protected job, sometimes with advantages regarding wage and pension schemes designed, on the one hand to strengthen civil servants' position against potential intervention from government, and on the other to guarantee equal treatment of citizens by the bureaucracies and to diminish the likelihood of corruption.

The situation has changed in some Member States slightly, in others dramatically. On the one hand tools for the rationalisation and reorganisation of office work were provided, starting with

[20] Frissen, Paul (1997), p. 114.

the PC revolution in the 1980s, followed by the development of computer networks and data highways in the 90s. On the other hand, European governments (and enhanced in the framework of the measures set up for a common European currency by the Maastricht Treaty) are nowadays seeking to reduce state spending, which also affects the public sector and administration.

At present work organisation and the political self-definition regarding authoritative or hierarchical structures for internal and external communication differ to a high degree among the institutional cultures of public administrations in different Member States. Despite these differences, it has been possible during the last ten years to observe a general, if not discursive, shift towards a public and customer oriented transparency of information, horizontal co-operation within and between administrative units, and a trend towards increased service orientation of administrations.

Table 4: *Government employment as percentage of total employment*

	1960	1974	1985	1990	1995
EU 15	11.2	15.2	18.9	18.4	17.8
Austria	10.6	15.0	19.6	20.7	22.5
Belgium	12.8	15.5	20.4	19.8	19.2**
Denmark	15.2*	22.2	29.7	30.4	30.7
Finland	7.7	13.8	20.1	21.9	25.2
France	-	17.4	22.9	22.8	24.8
Germany	8.1	13.0	15.5	15.1	15.6
Greece	-	-	-	-	-
Ireland	-	12.9	15.9	14.1	13.4**
Italy	-	13.4	15.2	15.6	16.1
Luxembourg	-	9.7	11.7	11.0	11.4
Netherlands	10.9	12.4	14.9	13.5	12.1
Portugal	4.2	8.7	13.2	15.3	-
Spain	6.5*	9.3	14.3	14.1	15.2
Sweden	12.8	24.8	32.7	31.6	31.3
U.K.	16.4	19.6	21.5	19.4	14.4

*Source: OECD, Historical Statistics (1997), *figures for 1968, **figures for 1994.*

This is also supported by technologies that provide the potential for dealing rapidly with large quantities of complex information and for reducing the constraints of location and social status which hinder access to information. Criticism of the inefficiency of bureaucracies, formerly a standard of conservative parties, became a general item on the political agenda and appears nowadays with slogans like ‘new public management’ and ‘lean administrations’.[21]

[21] see Mitterlehner/Kyrer ed. (1997).

Data as shown in Table 4 must be interpreted cautiously. Already a decrease in growth in government employment might indicate structural changes, but the figures must be seen as results of various factors. Changes in the percentage of employment can be due to shifts in other economic sectors. Available macro-statistics do not differ between core administration and the entire public sector. A decrease of employment might either indicate reduced recruitment or job losses without a change of the institutional framework, or might be the result of outsourcing and privatisation.

1.3. Research: State of the Art

Exceptional cases featuring public administrations as telework practitioners have been presented on European Telework conferences, supported by national actors and DG XIII (Telecommunications, Information Market and Exploitation of Research) of the European Commission.[22] These presentations have partly described actual experiences, and partly introduced future plans for telework pilots. A systematic investigation on national level was mainly done in single cases for exceptional models of telework schemes when evaluated by external researchers and consultants. The majority of these findings are unpublished. For our study we considered all the findings available.

Transnational statistics on advanced computer technologies used by public administrations are not available. In a few countries ministries have carried out such surveys (see Part Two). Apart from a few indicators in the TELDET-survey, we could identify only two national surveys dealing with quantitative aspects of telework in public administrations: the Catral survey on telework in French bureaucracies and an unpublished study of the Swedish Association of Municipalities.[23]

Existing literature focuses little on the reasons why public administrations are teleworking, it mainly focuses on why they *should* telework.

In the context of the strong tendency for individualisation in recent times, one of the most attractive promises of telework is the enhancement of staff satisfaction, empowerment and increased autonomy regarding the management of individual time. This is suggested to public administrations as well as to any other organisation. Furthermore, it has been suggested that, by changing their own work organisation, public authorities 'can promote teleworking in order to achieve certain policy objectives'[24], e.g.:

- as part of their commitment to equal opportunities an increase of the proportion of disabled people in the work force;
- environmental strategies such as the reduction of traffic volume and pollution;

[22] see Stewart, Brian W. (1997), de la Serna, Enrique (1997), Domanti, Antonio Vecchio/Haines, Mary (1997) and http://www.nutek.se/telework97conference/cases/

[23] Unpublished study by Lars Ericcson, Kommunförbundet.

[24] Locke, Trevor (1996), p. 1.

- the promotion of distance learning as a vehicle for continuing professional development and more inclusive employment strategies;
- the promotion of electronic commerce, teletrade or tele-business including the emergence of virtual enterprises and digitised micro-enterprises;
- the enforcement of self-organising social solidarity and aid in local communities;
- economic regeneration of rural areas.

1.4. Methodology

Design

The prior objective for our study was to identify public administrations that could be used as teaching examples and analyse the way in which they organised telework. For the overview we cooperated with colleagues from experienced research institutions in each Member State. Based on the assumption of a low proportion of public administrations as telework practitioners in the majority of Member States, the first objective for these researchers was to find out about those on national, regional and local level which either a) successfully implemented teleworking as a common pattern of work, b) had a telework pilot in place, or c) showed documented and explicit intentions and first steps to introduce a telework scheme in the near future.

Within the available resources this activity was based on already existing experiences within the 'telework-community'[25], research for publications and unpublished reports (official reports as well as feasibility studies, internal work reports and evaluation) and following document analysis.

For a systematic analysis of the identified cases we designed and distributed a questionnaire which also considered experiences already identified.[26] A pre-test was carried out in a Swedish and an Austrian organisation. The researchers were asked to target middle managers in charge of the introduction of telework schemes (IT-project leaders, telework managers, staff managers, and heads of divisions) and interview them either face to face, or via phone, fax or email. These interviewees were supposed to be able to provide us with comprehensive and complete information. Results have to be read as reflecting the interests and specific institutional position of this group. Further, the researchers were asked to deliver a short country report on national IT-policy and activities hindering or supporting the implementation of telework in public administrations.

[25] The term „telework-community' here is used in a similar loose way as e.g. the term 'academic community'. It refers to the little universe of European protagonists (researchers, consultants, politicians, managers, civil servants) dealing continuously with the specific issue of telework in studies, pilots, projects, workshops and conferences.

[26] DIPLOMAT-survey on the „Deployment of Telework in Europe', Deliverable D 20, July 1997, and Catral (1997).

For some of the Member States, we could not be sure of finding even one single case. Hence, due to this exploratory aspect of the study, selective criteria for the targeted institutions were ‘soft’ and were mainly exclusionary in character.

It has been already stated that the term ‘public administration’ according to different frameworks in different countries, covers a complex variety of activities and professional tasks. For example, in many countries teachers, university teachers and employees of museums are formally civil servants. Researchers were asked to:

1. exclude private institutions that formerly had been part of the public sector, e.g. telecom providers.
2. focus more on the administrative core work of authorities than on services provided by them, such as public health care, social work, training and education.

Nevertheless, in many cases administrative tasks and services are linked with each other. Such services were only regarded, if traditional office work and the administration of these services were carried out at a distance from traditional workplace.

For the majority of the Member States such a ‘soft’ catalogue of criteria proved to be justified as the number of teleworking public authorities is marginal. From a retrospective view only in four countries - Germany, The Netherlands, Sweden and the UK - the absolute number of practitioners might have justified a more diversified approach and selection.

For the overview we were interested in:

- the proportion of teleworkers in the respective administrations, units, departments, or divisions;
- the type of work (tasks) carried out via telework;
- the types of telework-practise (alternating, home-based, mobile, telecentres, mobile, remote office sites);
- the original reasons for the implementation of telework;
- the fulfilment of original expectations;
- obstacles and difficulties in implementation;
- participatory aspects in the transformation process;
- pattern of labour relations regarding status of employment, regulating frameworks and awareness for matters of occupational health and safety (OHS);
- the monitoring, measurement and division of labour;
- further organisational change intertwined with telework;
- perceived risks and benefits of telework;
- the promotion of telework-related policy objectives by the public authorities.

Analysis

In total we studied 15 cases within this outline. We extended the sample to 22, with seven cases from a general survey on telework deployment undertaken in July 1997[27] for those items where both surveys used identical questions.

In Part Two, one case per Member State is presented in full, whereby in many cases the results from the questionnaires were enriched with supplementary information from internal work papers and evaluation reports. One of these cases is a supra-national European institution, eight are national ministries, two are regional bodies, eight are local authorities, and in three cases we accepted administrations of public universities. Despite the differences of these organisations - size, objectives, national background - we cautiously sought to identify some similarities and differences regarding work organisation.

Pict. 1: *Institutional level of analysed bureaucracies*

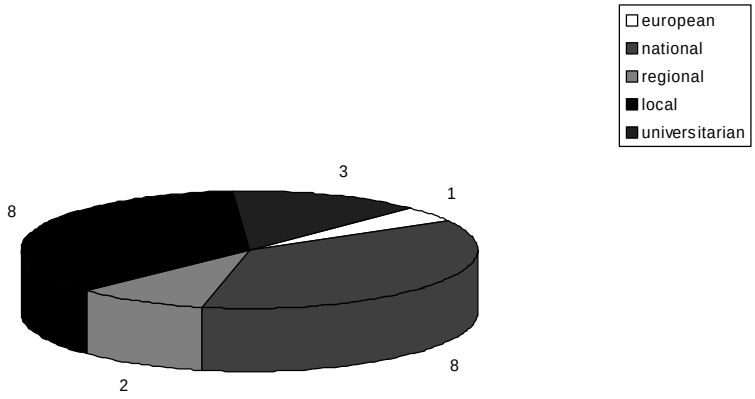

Table 5 : *Analysed cases per Member State (extended sample)*

Member State	**Number of studied cases**
Austria	3
Denmark	1
Finland	1
France	1
Germany	1
Greece	1
Ireland	1
Italy	1
The Netherlands	5
UK	3
Sweden	1
European Institutions	1

[27] DIPLOMAT, AC 222, D 20.

Cases could not be identified in all Member States (see Part Three). Due to the preconditions of such a heterogeneous and small sample, statistical treatment had to be reduced to counting frequencies. Any results have to be rebound into the context of experiences from the single cases and seen in the framework of macro-structures as national policies.

Part Two

Selected Cases

Policy Environment at European Level

When the European Commission started to show interest in the issue of telework in the late 1980s, first initiatives taken were research on telework in rural areas, social and psychological aspects, the impact of telework on business and a number of awareness raising and stimulation actions.

The majority of such supranational activities followed the paradigm of economic growth and competitiveness. The White Paper on 'Growth, Competitiveness, Employment, the Challenges and Way Forward into the 21st Century' launched in 1993 and adopted as an 'Action Plan' in 1994[28] , can be regarded as the first milestone highlighting the relevance of Europe's role in a so-called global 'Information Society'. It is essentially a policy document reacting to the USA's predominance regarding worldwide ICT-markets and as expressed by the establishment of a North American Information Highway.[29]

A High Level Group of industrialists chaired by Commissioner Martin Bangemann (DG XIII) identified telework as the first of ten applications for future economic development. In the framework of these aspirations, the liberalisation of the telecom sector was achieved, and deregulation and competitiveness as core principles have guided ICT-development within the '4th Framework Program (1994-1998) for European Research and Technology Development (RTD)' and via the 'European Structural Funds'. In following up the 'Action Plan' in 1995 the

[28] 'Europe's way to the information society: An Action Plan', COM (94) 347, 19 July 1994, updated in: 'Europe at the forefront of the Global Information Society: Rolling Action Plan' COM (96) 607, 26 November 1996.

[29] A compilation of intentions and measures is provided by Europäische Kommission, DG III, Eurostat (1998), p. 26-2/3.

'Information Society Forum' with 124 members (NGOs, parliamentarians, industry, unions, scientific experts etc.) dealing with nine different thematic areas was founded to serve the Commission as a 'think tank'.

Matters of 'Employment' were a recurring theme of the first European policy papers and have been targeted in initiatives. However, against the background of the White Paper, it is possible to observe a paradigm shift towards an increased awareness for the socio-economic impact (including potential risks of telework) and towards emphasising the role of the individual vis-à-vis advanced technology. With emphasis on labour law, social security and occupational health and safety, DG V and the 'European Foundation for the Improvement of Living and Working Conditions' in Dublin have funded comparative research.[30] Two Green Papers[31], and the replies to them addressed the social aspects of telework and revealed a highly polarised debate between neoliberal approaches and supporters of regulative mechanisms. DIPLOMAT (AC 222) is a DG XIII-funded project identifying areas of dispute and agreement and the perception of telework risks and benefits among major European players (unions, industry, government and public administrations, SME-lobbies, universities etc.) resulting in 'good practice' guidelines. MIRTI (TE 2008), a project within the Commission's Telematics Applications Programme is the study of collective agreements and telework contracts all over Europe and aims at developing model contracts. At present, DG V prepares consultation of the European Social Partners, whether and how far regulation of telework might be desirable and applicable.

The Members of the European Parliament have regularly directed queries to Commissioners dealing with various aspects of the 'Information Society'. A number of MEPs have signed 'The European Charter for Telework'. EPRIWATCH is a project dealing with the implementation of ICT within the Parliament's own offices.

Despite the numerous activities launched at the supranational level and a great stock of accumulated knowledge on telework, the European Commission (as Europe's largest bureaucracy) has so far been hesitant to implement telework to change its own organisational patterns. In 1997 the Commission announced that it will 'study how telework can be promoted within the Commission'.[32] At present DG XIII and DG V are in a planning phase for setting up a telework pilot in their own units.

[30] i.e. Korte, Werner B. (1996), Blanpain, Roger (1997), Pennings, Frans (1997).

[31] 'Living and working in the Information Society: People first', COM (96) 389, 30 September 1996; „Partnership for a new organisation of work', COM (97) 128, 16 April 1997.

[32] European Commission: The Social and Labour Market Dimension of the Information Society. People First - The Next Steps, COM (97) 390.

Case No. 1: Institutions on European Level - The Translation Service for the European Parliament (DG7)

Background and motivation

The Directorate General for Translation and General Services (DG7) at the European Parliament already provides an example of a carefully outlined and introduced telework scheme which is well established and can serve as a European-wide example how ‘to take their own medicine’. A decision to introduce a pilot was made in autumn 1995 and started with high appreciation among individual staff members in 1996. Of the 3,500 people working in DG7, at present 22 translators conduct their work for the European Parliament via homebased telework. Employees were mainly motivated by the prospect of increased autonomy in the management of time and work, flexibility to deal with personal and family matters, and avoidance of mental distress they felt in the main office. Additionally the management anticipated improvements in retaining experienced staff members, savings of travel and office costs, and increased efficiency due to fewer interruptions and redistribution of work.

Implementation

The pilot phase lasted for one year and was monitored by a Joint Committee comprising staff members and representatives of the administration. Teleworkers had quarterly meetings with their Director and the Director General and were assessed individually after a trial period of six months. The initial evaluation after six months and repeated after two years serves the institution as a permanent tool to enable it to decide about each individual continuing to telework. At present, telework is practised throughout nine language divisions and the Informatics, Language and Documentation Support Division (SILD). One staff member of the latter carries out terminological research and maintenance of data-bases from home, the majority of the teleworkers translate documents. Although most of the translators come to the Parliament less often than once per week, they have not mentioned feeling any unusual degree of social isolation. The teleworkers expressed satisfaction with enhanced life quality, the organisation recognised increased productivity - which in the case of teleworkers is measured in output of translated pages rather than hours present at the work place. There is a further difference between them and the colleagues working at the employer's premises. Teleworkers can rely less on assistance from typists and are expected to deliver finished work.

Regulations

DG7 uses a standardised contract for specific telework regulations. It regulates the beginning and end of telework depending on employees' willingness and the employer's allowance to start with teleworking. Further items are the modes of transmission of documents, copyright and confidentiality, the availability of the teleworker, maximum distance to central workplace, purchase of equipment and reimbursement of telecom costs by the organisation, technical support, and the teleworker's responsibility for equipment. In the case of injuries in the home office it is the responsibility of the teleworker to prove that it related to the professional activity. Further, the duty to inform about damage or theft of equipment is part of the agreement.

Obstacles

The main barriers have been of a technical nature. One aspect of confidentiality is that teleworkers are not connected with European Parliament's internal network. Still, the network shared among translators needed development to enable the exchange of standardised documents and high volume information. Current efforts are dedicated to three aspects: bandwidth, standardisation of documents and security matters. Further, lack of knowledge regarding the psychological dimension of organisational change, current career and employment configurations, and problems of communication between staff members were named as factors that might hinder a further expansion of telework. The DG7 will establish a shared office for teleworkers at central workplace which could serve as one step towards improving communication.

Lesson learned and outlook

The case indicates that translation as a routine task with intellectual demands seems to be highly suitable to be carried out via distance work (perhaps apart from stressful on-demand situations). Also a 'classical' mechanism of telework can be found: a wide range of monitoring mechanisms suggests that appreciated individual flexibility is linked to precise monitoring of work results. The organisation - with the awareness that changes in work style are being observed in a complex institutional framework - has spent considerable efforts on procedures of internal consultation, evaluation, the configuration of formal agreements and technical improvement. An evaluation proved the fulfilment of original expectations. Internal reports can even be regarded as enthusiastic and the work style is expected to be expanded within the administration.

Case No. 2: Austria - The Federal Office for Metrology and Surveying

Policy environment

So far the political actors in Austria have not developed a coherent and focused approach in dealing with telework. Nevertheless, a variety of institutional stakeholders are engaged in fact-finding, debate and promotion. A common concept for an increasing support is currently entering the political agenda of the government, mainly planned as an incentive instrument for employment creation and regional development. Austria's Central Statistical Office has recently integrated telework in a special programme of the regular national panels (micro census).[33] One of the major factors hindering a broader deployment of telework as identified by the domestic practitioners is the cost of telecommunications; charges are the highest within the European Union.

The Federal Ministry of Labour and Social Affairs has ordered a telework study[34] and figured among the organisers of a conference dealing with the social implications of telework in the frame

[33] Österreichisches Statistisches Zentralamt (1997), p. 18-23.
[34] Centre for Social Innovation (1997).

of the 'European Telework Week 1997'. To date the position in the political domain is that present national labour law and national law for homework provided sufficient security for teleworkers.

Two Austrian ministers recently signed 'The European Charter for Telework'. In the same context the Union of employees in the public sector (GÖD) actively participates in the elaboration of pan-European guidelines as well as the City of Vienna's Directorate of the department for IT management. Telecentres in several provinces (Carinthia, Lower Austria, Upper Austria, Vienna) emerged in the context of European projects and are supported by regional governments. Significantly, in the private sector the IT industry figures as a forerunner of employer-led telework schemes.

Telework has been the subject of a comprehensive report by the white-collar trade union GPA which resulted in proposals for model contracts and guidelines. These guidelines reject mere tele-homework and favour alternating tele-homework, demand a variety of tasks against monotony in telework, underline voluntariness and the right of return to central office, access to in-company training, and a link between telework schemes and development programmes for women. Flexibility in work should neither lead to working hours beyond legal regulations and reasonable limits, nor should telework be used as a push towards involuntary freelance work. Further items deal with a prohibition of electronic supervision, salaries, reimbursement, adaptation of offices, access to home-offices for OHS-checks, contact with the union and communication with the headquarters.[35] Representatives of the GPA successfully negotiated the first national collective agreement containing aspects of telework with the Austrian oil industry.

The event of 'Telework 96, the 3rd European Assembly on Telework and New Ways of Working' in Vienna 1996 can serve as one example for the activities of local contractors in EU-funded projects as well as a recent workshop on 'Public Administrations and Telework'[36] in the framework of the annual conference 'Global Village'.

The first pilot in a domestic public administration started in 1994 at a regional level. Four employees of the Statistical Services in the Government of Upper Austria carried out alternating telework within a pilot limited to a duration of nine months. Despite an overall positive evaluation the practitioners also recorded some negative experiences, including technical problems with software connecting to the department's intranet, uncertainty over legal conditions, employees' perception of unsatisfactory office equipment, of isolation at work, of intensified workload and problems with the organisation for transporting documents between the headquarters and the home-offices.[37] After a short break the pilot was resumed, and nowadays additionally is combined with the facilities as provided by a local telecentre. The trial has expanded to 20 participants and includes on-line work with advanced software such as Computer Aided Design (CAD).

[35] Gewerkschaft der Privatangestellten (GPA) (1996).
[36] Organised by DIPLOMAT, AC 222, Vienna City Hall, 28 March 1998.
[37] see Aichholzer, Georg/Kirschner, Andrea (1996), p. 4.

Since 1995 employees of the Federal Ministry of Education and Cultural Affairs, including teachers have been carrying out and administering distance learning-courses from home offices and satellite offices. The IT department of the City of Vienna is at present in the early planning stages of a trial comprising 36 civil servants. Telework is regarded as a priority of further targeted organisational change focusing on staff members' creative potential, efficiency and improvement of internal communication between departments, and the emergence of 'management by trust'. One of the most interesting examples is given by the Federal Office of Metrology and Surveying, where telework is outlined as a component of far reaching structural change.

The case

Background and motivation

In the context of overall restructuring of the central administration, it was originally planned to outsource the Federal Office of Metrology and Surveying. With 1,700 employees, this office is a division of the Federal Ministry of Economic Affairs. A feasibility study showed an internal reform as the cheaper solution. A reduced labour force will be managed without loss of jobs, but based on reduced replacement of retired employees. The reform targets a reduction of the number of departments and remote office sites.

Implementation

The remaining satellites are serving as hubs for tele-cooperation and are also available for private users as telecentres. 25% of the administration's employees are expected to use their homes as offices. Further to this, a 15% increase of productivity via telework is expected. The major benefit for employees is seen in new opportunities to choose their workplace, whereby the employer provides a brokerage domain for jobs to enable the coordination of individual choice and mobility. The pilot is still in a planning phase (since the end of 1996) and was introduced during 1998. The co-ordinator responsible for the telework concept and strategic plans at the same time holds the function of a high level union representative. Awareness building and information processes are considered as an important part of 'good practice', especially emphasising the common problem of hierarchical transformations within public administration.

Teleworking, intensified networking and data share via new technological equipment will be used for increasing customer services as well as for the creation of an Austrian digital map. A questionnaire to evaluate internal transfer needs and individual perceptions for or against telework has been developed by the telework manager in co-operation with the DIPLOMAT project in Vienna.

Regulations

Neither changes regarding working agreements nor shifts of employment status are foreseen for the teleworkers in particular. Individual contracts will regulate specific telework matters.

Obstacles

The pilot faces objections from central administration as well as from middle management within the department's own ranks. The reduction of departments will require fewer management functions, and managers facing the prospect of reduced staff numbers also fear a loss of relevance regarding their own positions.

Lesson learned and outlook

In a climate of competitive pressure the outline of the trial, according to its promoters, instrumentalises telework for a smart solution of structural change providing a stable frame of relative high security for employees. To a certain extent this is due to the personification of social partnership (telework manager and unionist) by one and the same protagonist. A main lesson for the promoters of telework in debates with their opponents has been the proof that employment arrangements of civil servants in Austria are flexible enough to allow a workstyle with flexibility of time and place, whereby a solution preferring work at remote offices to homebased work also serves them to circumvent potential legal complications (insurance, accessibility of teleworkers' homes). The pilot is currently setting up the first practical steps.

Case No. 3: Denmark - The 'Arbejdsskadestyrelsen' (National Board of Industrial Injuries)

Policy environment

Denmark is among the most advanced member-states of the European Union regarding the deployment of infotech infrastructure. According to a Gallup poll carried out in 1996, 47% of Danish homes had a PC, nearly 5% had a modem. Based on figures of an IDC survey carried out in 1995, it is estimated that these days work places are equipped with over one PC per salaried employee. In 1995, Denmark had about 19 mobile telephones per 100 inhabitants.[38]

The Danish government's political action programme on ICT 'Fra vision til handling' of March 1995 does not include telework explicitly. However, the Danish strategy proposes and supports the implementation of electronic service networks in public administrations at all levels, and favours partnerships between the public and the private sector. In May 1997, the Danish Board of Technology initiated a national Consensus Conference on Teleworking which highlighted the question, whether and to what extent telework demanded regulations of the labour market and how the extent and content of IT development can be determined. In a final document the conference panel recommended the preparation of a telework-handbook for private and public enterprises by the Ministry of Research and Information Technology.

As a consequence of 'Fra vision til handling', 275 municipalities and 14 counties participated during 1996 in a telephone survey about their role in the Information Society and Automatic Data

[38] Ministry of Research and Information Technology Denmark (1997).

Processing (ADP). The investigation assessed the status quo regarding technical equipment, and investigated the use of office automation systems, changes of work processes and ADP-strategies. According to the Ministry of Research in January 1996 only two out of five local authorities had electronic mailboxes, but two thirds of them expected to have caught up by the end of the year.

A future project in the context of the government's ICT activities is the fusion of two ministries - the Ministry of Environment and the Ministry of Energy - into one 'virtual ministry' with 150 addresses.

The Ministry of Social Affairs has been supporting numerous telework projects in public and private organisations. This support has been mainly led by the expectation that telework enables employees to find a better balance between work and private life. As a part of these activities and in co-operation with the Ministry of Research, five municipalities in southern Jutland - Prästö, Mön, Fladsaa, Vordingborg and Langebaek - are conducting telework activities in a pilot project.[39]

Among three sectors a framework collective agreement regarding telework has been agreed upon for county and local authorities (KTO) in 1997, also defining issues for local and individual agreements. The framework agreement fixes:

- that it only applies to regular performed telework;
- the principle of voluntary teleworking;
- that the employer supplies the teleworker with necessary equipment or compensation;
- that a certain time for the teleworker's availability must be appointed;
- that overtime has to be noted;
- that mutual trust is a precondition;
- that contact with the workplace must be secured;
- that in general security in employment must be considered.

The case

Background and motivation

The 'Arbejdsskadestyrelsen'is an organisation working for the Ministry of Social Affairs. A telework pilot in the department for 'Sagsproduktion', starting in 1996, was initiated by the senior management and prepared carefully and with broad participation. As main reasons for the trial, two policy objectives are declared:

a) to make own experiences with telework for a broader societal use;
b) in the scope of the Social Ministry's policy (see above) a development towards the improvement of quality of workplaces and the creation of family-friendly work environments. From a managerial point of view the attractiveness of flexible work patterns should help to retain experienced staff members.

[39] Christiansen, Andreas Haaning (1997).

Implementation

The preparatory phase lasted for 27 months. In 1995, the management found agreement with the union on the details of the pilot. The current project is monitored and evaluated by several actors which are the management of the organisation functioning as a steering committee and an external consultant. In charge of the implementation are the Head of Unit and the Unit's secretariat, the ADP secretariat's adviser, the project leader, the ADP supplier, the project manager representing the employees and the daily Head of the service centre. Additional technical equipment for teleworkers' needs was financed by external funding. Our interviewee, being one of the organisation's managers, regards this broad participation as one of the strengths of the pilot. Technical training for teleworkers as well as matters of occupational health and safety have been considered.

The ‘Sagsproduktion’ decides how injuries at work are handled. Besides the decision-making itself, the work consists of administrative processes like the registration of incoming letters, the reading of electronically scanned letters, responding to customers' letters and telephone communication with customers. Ten of the 24 members of the department are practising alternating telework in an fully employed capacity, spending one to two days per week at home. Eight of them are women. 80% of the tasks formerly carried out at central workplace can be done in the home offices. One particular operation is exempt from home-based work. Signing letters (the act of official approval) is still bound to the common workplace.

The introduction of telework is seen within a comprehensive approach for organisational change towards objective and team oriented work, improved communication with other administrations and departments, and an improved response rate to customers. Increased autonomy of staff members together with the technical provisions is supposed to enable them to deliver work with a final character which is ready to be published.

Regulations

Between employer and employees several issues are regulated in individual contracts. The agreement appoints the duration of the individual's participation in the pilot, contains matters of security and confidentiality, insurance, taxes, control visits to home offices by the authorities, technical support, the frequency and duration of work time at home and in the central office, and the teleworkers' availability by phone. In line with the organisation's core competencies, matters of occupational health and safety such as ergonomics, work safety and liability for injuries (also injuries of third persons) are part of the agreement.

Obstacles

Lack of knowledge regarding the psychological dimension of telework and technical problems proved to be the main barriers for the implementation. The staff members had to adjust to proceeding with a new electronic document and work-flow handling system, and deal with the challenges of work at distance simultaneously. This was felt to be exceeding the limits of what was possible within the given time frame. The system carrying files including more than 100 documents and allowing access and processing from the home based workstations caused

problems in Human Computer Interaction. The hypertext design proved to be inadequate to human needs and perception, and caused feelings of disorientation. Further, the connection of the home offices to a closed ISDN-user-group did not work as successfully and reliably as expected.

Lesson learned and outlook

The participants of the pilot learned a remarkable lesson about not differentiating work and the private sphere. The creation of the home as a family-friendly workplace in the sense of harmonising the opposition of work and leisure time failed. Instead in keeping up the distinction of 'work' and 'privacy', individual flexibility in the management of the two spheres came to be appreciated. General productivity increased during the days of home based teleworking. Positively experienced is the acceleration of information flows. In a general statement the interviewee regards the pilot as an encouraging model and expects an increase of telework within the organisation.

Case No. 4: Finland - The local authorities at 'Espoon kaunki'

Policy environment

'Teleworking in Finland is seen as a way of supporting the expansion of a new working culture, and in particular, of supporting small businesses in the rural areas and creating a new action culture in the Finnish communities suffering from unemployment through collaboration with voluntary organisations to encourage voluntary work.'[40]

80% of telework in Finland is practised informally, thus, formal agreements between employers and teleworkers are the exception. Nevertheless, an expert in the Ministry of Labour states that 'teleworkers' legal status with regard to labour law is not vague in Finland, because labour legislation applied to teleworkers is the same as that of other workers.'[41]

At national level the Ministry of Labour and the Ministry of Education are promoting, supporting and funding projects in the framework of 'Finland's National Telework Development Programme'. This programme suggests changes of the public administration and the public sector itself. The co-operation with Scandinavian and Baltic countries and Russia are sought to be supported by setting up virtual offices in these areas for an experimental period of three to five years. Telework in the public sector is promoted in order to reduce work-related travel and decrease environmental impact by redirecting investment from physical transport to information technology infrastructures.[42] Municipalities, regional authorities and national ministries have been provided with handbooks and recommendations on telework practise. Nevertheless, in contrast with a general awareness in Finland (and successful projects in 44 telecottages by the beginning

[40] Huws, Ursula (1997), p. 36f.
[41] Pekkola, Juhani (1995), p. 12.
[42] see Huws, Ursula (1997), and http://telmo.telmo.fi/tieke/tikas/indexeng.htm.

of the 1990s), telework in the public administration is not a very widespread phenomenon. One of the most prominent Finnish teleworkers is the current Minister of Administrative Affairs, Jouni Backman. The few cases within the public administration also serve as demonstrative examples for broader societal use.

The case

Background and motivation

In 1995 two units of the administration of the town of Espoo, the technical centre and the department for town planning, started a telework-pilot. It emerged as a self-organising process in co-operation between senior management and staff members. Reduction of commuting time has been one of the advantages seen for the employees. Further, one of them with a backbone disease is enabled to work full-time. The policy objectives of the pilot include encouraging an integrated employment policy, increased flexibility of labour, and traffic reduction. The cost effects of teleworking are monitored to provide potential follow-up projects with findings.

Implementation

All tasks carried out at the central office are shifted for two days per week to home offices. Two teleworkers are in charge of traffic planning and related word processing. The third person involved is the project manager of the pilot, working for the technical centre. Work was restructured by team- and result-oriented management. The unit manager and the teleworker jointly define the objectives for the following two weeks. Results are recorded likewise every fortnight.

Obstacles

As the only problem noted was that the technical equipment and the transmission of data do not function as well as expected.

Regulations

On the basis of individual contracts it is agreed that the employer covers insurance for the home offices. The contracts govern the period of the project, tasks, work time, availability of the teleworkers, the frequency of work reports, ownership and responsibility of hardware and software, as well as the costs of infrastructure. The teleworkers are reimbursed at a standard monthly rate for the costs of telephone, electricity, cleaning, and paper.

Lesson learned and outlook

The IT manager identified a lack of technical equipment and computer skills as the main hindering factors for a further deployment of telework within the administration. For a proposed extension of the pilot, his estimations were more optimistic than those of Espoo’s local authority’s personnel department. Regarding the teleworkability of tasks, from his point of view 2% of the 10,500 employees could start to telework immediately, provided that technical standards and computer skills were modified.

Case No. 5: France - The administration at the University Marne, La Vallée

Policy environment

According to available evaluations (see Table 2), telework penetration in France ranks at EU average, whereas PC deployment and provision of email is at quite a low level. A special interest group on telework has been set up in the National Assembly, and further interest exists within the Senate. One of the major unions (CFDT) is dealing with the social impact of distance work.

In the political arena telework is considered as a new workstyle rather than a specific type of work. Hence, the tendency is to apply existing labour law regulations to different practices of telework, whereby three main patterns are taken as a basis. The self employed teleworker, the home-teleworker, and the 'common' employee conducting telework including mobile work.

As a further interest group the French Telework Association (AFFT) was created in March 1997. It organises annual telework conferences with high level political participation in Serre-Chevalier.

Since 1993, Catral, an agency of the Ile-de-France regional government has been one of the major protagonists in promoting telework. Catral has developed a neighbourhood office project, whereby one of the defined goals is a reduction of urban traffic volumes. In 1996, the concept received a European award for a 'best practice' telework application in the context of the 'Bangemann challenge'.

At the request of Central Government, Catral carried out a survey in 1997 on the implementation of telework in public administrations. Telework practice could be found in fewer than 5% of the

responding organisations. All in all just 55 teleworkers could be identified. The principal barriers for teleworking were found in the so-called 'closed mentalities' towards modernisation and the implementation of new technologies. Environmental benefits such as reducing traffic have been identified as potential advantages of teleworking, whereas the image of teleworking regarding social coherence is viewed critically. Telework is considered as tending to cause isolation and precarious working conditions. In the comparative summary of expectations and results the quality of life, productivity and organisation of services obtain high scores, whereas services delivered to the public and staff economy rate lower than expected. 75% of the identified telework practitioners expressed their interest to continue with this workstyle. The analysis show that flow of different definitions of teleworking, mixing up telework and working at home, communication failures in general, and the persistence of hierarchies are the main reasons for contradictions regarding expectations and results.

A recent report to the Prime Minister focuses on ten priorities for a development of the Internet in France, among them a reform of the public administration. Proposed measures are awareness raising for ICT potential within bureaucracies, diffusion of multimedia applications, extension of intranets and links to the internet as well as an improvement of public services.[43] Telework practice was found in the following units of the French public administrations: Ministère chargé des anciens combattants , Ministère de la Justice, Ministère Délégué à la poste, aux télécommunications et à l'espace and Caisse des Dépôts et des Consignations, Conseil Général des Alpes Maritimes, Préfecture de l'Isère, Conseil Général du Var, Conseil Général des Deux Sèvres, Conseil Régional de Lorraine, Conseil Général de la Martinique.

The case

Background and motivation

A telework pilot at Marne University's administrative level has been introduced to bring about a new distribution of work among staff members, to improve individual management of work and private life, and to save travel costs. Teleworking is also considered as a special tool to develop electronic publishing in the context of distance learning and a general reduction of course materials.

Implementation

Among 150 employees, four women are conducting telework on five days per week from remote office sites. The teleworkers are in charge of personnel administration, lecture management, student management and logistical tasks. Word processing, electronic publishing and web development are conducted mainly as telework. The teleworking equipment is purchased by the administration and private home is not used as offices.

Regulations

There are no specific regulations in place.

Obstacles

Observed barriers for further implementation deal with communication problems within the staff as well as current career and employment configurations.

Lesson learned and outlook

The results of teleworkers compared with their conventional colleagues show increased responsibility for work, better quality and greater productivity. A further deployment of the work style is expected.

[43] Martin-Lalande (undated), p. 23/24.

Case No. 6: Germany - The Federal Ministry of Education and Science

Policy environment

In general the rate of increase of telework has until recently been rather low in Germany. However, a number of companies are running successful teleworking pilots (IBM, BMW, Siemens, Bönders Gmbh, Deutsche Telekom, Translation Services Company, Pragma Text, Fotosatz Froitzheim GmbH, Dresdner Bank Commerzbank and the insurance companies LVM, Allianz, Württembergische Versicherung). A study of 272 companies in the state of Nordrhine Westphalia found that 20% of the organisations claimed to have teleworking employees, mostly engaged in alternating home/office working.[44]

At Federal level, telework initiatives started in the late 1980s when the Federal Ministry of Regional Development, Housing and City Planning commissioned research projects in the area of the impact of new technologies on regions. One of the consequences has been the foundation of telehouses in rural areas of Germany. These activities did not have any success in establishing sustainable teleworking opportunities; they are still dependent on public funds and concentrate on offering telework training courses and conference activities. In 1993/94 the Deutsche Telekom AG developed their general teleworking strategy and now aim for a number of internal pilot projects.

Federal State government and ministries have started or are about to start their own programmes and activities regarding ICT-applications, which also include telework under the title 'Initiative Telearbeit der Bundesregierung'. The Ministry of Economic Affairs offers the opportunity to present prototypes of teleworking on an internet server, which was built up in the frame of the G7 pilot project 'Global Inventory'.[45] The German information society initiative (IID) was launched in 1996 by the Ministry of Economics. The Council for Research, Technology and Innovation (comprising representatives of the German scientific community, industry, and politics) has been charged with the task of providing a comprehensive overview of applications, problem areas, and activities in important fields of innovation and to make recommendations on that basis. The Council started its work in 1995 with three working groups: 'Research, Technology, Application', 'Legal Framework', and 'Cultural Challenges'.

The Federal Ministry of Labour and Social Order entrusted the Frauenhofer Research Institute for Labour Economy and Organisation with a study on the impact of labour legislation on telework. The final report was delivered in August 1997.[46] Potential needs for regulation for telework were identified in following areas: status of the pseudo self-employed (the faux indépendent), individual contracts for teleworker, accessibility of home offices, issues of occupational health

[44] http://www.mags.nrw.de
[45] http://www.bmwi-info2000.de
[46] Bundesministerium für Arbeit und Sozialordnung (1997).

and safety, contractual terms for enterprises and ventures, participation rights for unionists and staff representatives, union activities and rights.

Telework agreements have been introduced between the German post union and German Telekom AG, and between the Trade, Bank and Insurance Union (HBV) and relevant employers. They cover issues such as voluntariness, distribution of work and working time, registration of work, working space and equipment, reimbursement of expenses, data security, social insurance and contact with the main office.

Funded by the Ministry of Economic Affairs and Technology in Nordrhine Westphalia in the late 80s, a 'Teletech Initiative' was launched and followed by the initiative 'Media NRW' in 1995. The Federal State Baden-Württemberg has started a programme called 'Pilot Project Multimedia Baden Württemberg'. The aim of this programme is the experimenting with and usability analysis of multimedia communications services for private households and SMEs. In Bavaria, teleworking is being encouraged in the 'BayernOnline' initiative.[47]

In June 1997 a major international conference on teleworking took place in Berlin. 'Teleworx,' a new bi-monthly telework magazine, was launched in April 1997 and can be judged as a successful awareness communication tool. In August 1997 the general conditions for the 'Information and Communication Services Act' were set up with the purpose to establish uniform economic conditons for the various applications of electronic information and communication services.

Apart from four Federal ministries (Labour and Social Order; Education, Science, Research and Technology; Economic Affairs; Interior) conducting pilots in the framework of Federal Government's initiative to provide models for potential follow-up projects, the following practitioners at national, regional and local levels could be identified: The Federal Office of Security in Information Technology, the labour agencies in Heilbronn, and Chemnitz, the University Hohenheim, KGSt in Colonia, The Saxonian Ministry of the Interior, the Dortmunder Systemhaus, the Office of Data Processing and Statistics in Brandenburg, the Ministry of Economy, SMEs, Technology and Transportation in Düsseldorf, a public insurance company in Hannover, regional and local authorities in Fürth, Arnsberg, Maifeld, Altenahr, Kastellaun and Koblenz.

The case

Background and motivation

The Federal Ministers for Research and Technoloy will be permanent members of the Council for Research, Technology and Innovation. In the frame of the pilot projects to develop prototypes of telework the Ministry started its own telework experiment for an one-year period. The main motivation and expectations factors have been to increase the efficiency of management, to

[47] http://www.bayern.de

decrease work interruptions, to establish goal orientation for common work, to support team-oriented work, to increase the quality of life for staff, to save office costs, and to reduce labour costs as well as travel costs. Specific consideration was given to social and family issues. The introduction of telework is supposed to increase the proportion of disabled people as well as the proportion of women in the workforce.

Implementation

The pilot project started in 1996 with 19 participants (out of a total of people 1000 working for the administration), including all significant user groups (heads of department, consultants, part-time employees and also entire organisation units). 70% of the teleworkers were female, 30% male. All of them conducted home-teleworking two days per week. 80% of them were fully employed, 20% were part-time permanent staff. Staff members have been involved in the decision-making about the introduction of teleworking. Occupational health issues have been taken into consideration. The home-working place was checked regarding space, equipment, and ergonomic situation. The teleworkers got support by feedback and regular communication set up among the organisation team in charge of the implementation of telework and teleworkers. Monitoring of the results was carried out by the responsible heads of office. An evaluation combined with scientific review was organised at the end of the pilot project.

Regulations

Teleworkers were not measured in a different way compared with their colleagues. The contractual framework within the administration was handled by individual contracts. The home-working place was estimated as a ‘mirror’ to the office without net functions. The equipment was lent and the administration took over the purchase. No reimbursement for using the home as office was provided.

Obstacles

The relevant barriers for the implementation or a further expansion were problems in managing and filing documents, communication problems within the staff, problems of controlling work performance, problems of data protection, and decrease of face-to-face interaction with clients. Aspects of employment law and resistance of seniors were also mentioned. At the beginning of the experiment technical problems occurred.

Lesson learned and outlook

The problems described were mainly due to the hidden effect that teleworking not only had changed the place of work performance but the entire organisation of work including the traditional structures of communication. Our interviewee recommended an enforcement of permanent supervision and the enhanced provision of internal staff meetings during a pilot phase in contrast to emphasis on a final evaluation.

Some of the full-time employed alternating teleworkers perceived a phenomenon of workaholism and self-exploitation. Negative effects became obvious in the combination of work and family

life. The originally positive expectation of a better individual managing of both spheres changed into the opposite.

The voluntary principle and the opportunity to return to the office were seen as necessary elements also within a further development of the telework scheme. Alternating teleworking should be complemented by other decentralised workstyles as mobile working. It has been observed that a decrease in face-to-face communication is likely to result in a higher level of self-responsibility in work organisation. In general the recommendations of the evaluation aim for a cautious and careful step by step implementation. A future deployment should not pre-determine the participation in a telework scheme by specific ranks within the administration's hierarchy.

Case No. 7: Greece - The Technological Educational Institute of Piraeus

Policy environment

In general, the concept of teleworking has not been given any real consideration in Greece. Firm statistical information on telework is not available. Telework can be described as a rather informal, unofficial work style, mostly practised by the self-employed. The development of an advanced telecommunication infrastructure is modest. Greek Telecom does not yet offer ISDN services. The Greek telecom operator OTE has monopoly rights to provide fixed public telephone services in the country. This monopoly may continue until 2003 under EU liberalisation plans, although the situation may be reviewed prior to that date. A recent estimate suggests that about 40,000 to 50,000 people are Internet users. About 2% of the population use mobile phones. However, a number of measures regarding the integration of disabled people through teleworking or tele-education are in a state of preparation. These are supported by initiatives like TWIN, which seeks to establish international networking between tele-centres for the disabled, TELED an initiative providing higher education for the disabled via telematics, TELEWORKING a project employing disabled people who offer telematics advice to SMEs, and TELEGREAT a distance training and job placement initiative by a regional centre of the rehabilitation of disabled people.

Very slowly moving towards the horizon of an Information Society Greece is concentrating on the introduction of telecommunication technology in the private sector. One current proposal views to create a Teleworking National Focal Point as a source of expert advice, information and networking in Greece. A Telework newsletter as well as the creation of a Greek Telework Association is planned.

The case

Under the given circumstances only a case where the introduction of a telework scheme is intended can be presented. The Technological Educational Institute of Piraeus is planning a trial for the year 2000, with the detailed planning phase in 1999. The introduction of telework aims for the stimulation of distance learning and will be managed by the automation department. The main

goals regarding organisational change are an expansion of services, to increase creativity at work, decentralise services to the public, and to retain experienced staff members by offering them more individual flexibility. The pilot project has been initiated by the person who is in charge for computer technologies. Training will be offered to the participants, and guidelines for the pilot will be elaborated. Equipment will be provided by the employer.

Case No. 8: Ireland - Shannon Development

Policy environment

The Ireland has been at the forefront of the development of certain aspects of telework for a number of years. The country features prominently for the relatively large numbers employed in satellite offices offering data entry and knowledge abstraction for foreign firms. These companies which were supplemented by many telemarketing and localisation companies in the 90s came to Ireland as a result of the inward investment strategies of the IDA (Industrial Development Authority). Though these teleworking companies were in the private sector, the initiative to attract them came from a state institution established by the Irish Government.

This institution itself became the first public body in Ireland to participate in teleworking arrangements when its support section for small companies, the MENTOR programme, participated in the TELEWORK'94 project, EXPUN or Experts Unlimited. The mentors or experts made themselves available to those seeking advice through a call centre which forwarded client calls to them over the mobile phone network. The IDA is now split into two sections, IDA dealing with inward investment per se and Forbairt (which means development) dealing with established SMEs.

Ireland's Telematic and Teleworking (T&T) initiatives are lead by the state's inward and indigenous investment strategies concerned with the creation of new jobs, the retention of existing jobs and the development of rural and peripheral areas.

Recently, problems of traffic congestion and scarcity of office space in the cities are becoming significant. Though the number of teleworking initiatives in the public sector is still small, it is pushing innovation and IT dissemination very strongly. This is manifest in the number of reports published in the past few years including Forbairt's 'Ireland: the digital age, the internet' and in February 1998, the Government's Report on the Information Society. Recently, the Taoiseach (Prime Minister) appointed the retiring head of IBM Ireland to chair the review committee for policy and initiatives in this area.[48]

Apart from Forbairt, other public bodies involved in telework initiatives include the two regional development agencies, Shannon Development, Údarás na Gaeltachta (Gaeltacht Authority) and

[48] see http://www.irlgov.ie/entemp/

also Bord na Móna (The Peat Board). One of the local authorities in the Greater Dublin region has declared its intention of introducing telework to overcome traffic congestion problems.

The Irish Communications Workers' Union has a special membership category for teleworkers and is recruiting members, both conventional employees and the self employed. CWU is also widening its membership away from the state telecom company to include workers in other areas of information work such as telework.[49]

The case

Background and motivation

Shannon Development is a government agency responsible for industrial, tourism and rural development in the counties bordering the Shannon Estuary with the recent inclusion of North Tipperary and South Offaly. The whole administration employs 364 people. The unit for Corporate Services and Communications employs 50 people. The organisation's main task is it to develop advanced computer services and telematic strategies. Stimulated by a European Telematics Project (ENCATA) and encouraged by the internal information management, work patterns changed rather informally and in a self-organising process.

Implementation

Six months after the first plans for teleworking Shannon Regional Development began their telework pilot. Tasks fulfilled by nine teleworkers are report writing from home, remote access to the computer mainframe, programming, and training and technical support via nomadic work and from remote office sites. One person conducts homebased telework, five are nomadic workers, three work in remote office sites. The average time of absence from central office is two days per week.

The Communications Executive describes his organisation as ‘very enthusiastic and proactive in relation to telematics as a competitive advantage in attracting inward investment and developing enterprise, but nevertheless it is only marginally interested in telework as a model for its own staff.’ The marginal interest finds its reflection in some of the issues investigated. The organisation has not appointed a manager specifically in charge of telework; specific training and monitoring have not been implemented.[50] Security of data is regarded as a matter for each individual teleworker.

Regulations

There are no specific agreements dealing with telework.

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[49] European Commission, DG XIII (1997), p. 33.

[50] Social research interprets realities at a certain point of time. Furthermore, dialogue between researchers and interviewees can contribute to change realities. In the time span between field work and writing this report Shannon Development has developed a declared policy towards telework schemes, appointed a telework manager and technical training for telework is provided by this department.

Obstacles

The main barriers for a further expansion of telework are perceived to be the absence of a psychological dimension to the programme and low interest of staff.

Lesson learned and outlook

Telework also in public administrations can emerge unplanned, in an informal and self-organised way supported by a high-tech environment and existing ICT skills. In such an environment it might be regarded as a 'natural' and unremarkable side-effect of telematic applications. However, some of the difficulties described might be due to a deficit of consciously organised elements in labour relations. Despite a lack of goal orientation towards telework, the practitioners expect the work style to continue and expand within the organisation.

Case No. 9: Italy - The Municipality of Rome

Policy environment

The concept of teleworking has not fully entered the political and economic agenda of Italy. Recent surveys suggest that only about a 18% of Italian companies know about telework, even in economically developed areas. Nevertheless, a number of large companies have already signed collective agreements with trade unions and are about to introduce limited telework schemes. In 1996 and 1997 general national collective agreements were signed between employers and trade unions for the IT sector as well as the Service and Commerce sector.

'Lavoro & Technologies' (Research Association, Rome, Patrizio Di Nicola) drafted a legislative proposal which was suggested to the Italian Government and to other political forces, with the aim of promoting and developing the practice of telework. The proposal includes a national telework fund which will be also available to public administrations. The proposal has been presented to the members of Parliament and the social partners.

Several representatives of large companies and unions are participating in the DIPLOMAT consensus-process for the elaboration of guidelines in 'Labour Relations'. MIRTI`s (see p. 24) headquarters are located in Italy. One of the project tasks is to identify agreements of telework arrangements and providing expertise and support to social partners for negotiating telework collective agreements. This finds particular response from actors on national level, for example, ETD in Italy is heavily engaged in supporting the development of teletrade and telecooperation.

The Camera dei Deputati at Parliament has shown its intentions to introduce a telework trial. Four Italian Ministeries (Transport and Navigation, Cultural Heritage and Environment, Agricultural and Food Resources and Ministry of Justice) will participate in an experimental telework project, initially applied to the procedures related to staff administration. The Ministry of Transport and Navigation has initiated a new model of work organisation. An experiment with 40 employed

teleworkers has been involved in process re-engineering via teleworking applications since June 1997. Main reasons for the experiment are:

- reduction of working time for each administrative process;
- monitoring office workloads;
- improvement of work distribution;
- staff mobility replaced by work mobility.

The average age of the participants (60% female, 40% male) is 32, all employed full-time, using satellite offices or various forms of networking. The telework application has induced the Ministry to reconsider workflow and to simplify procedures, thus reducing bureaucratic hold-ups. Considering the intersectional nature of the project, it is hoped to extend telework applications to all Ministerial procedures and to the rest of the Italian civil service.

The case

Background and motivation

The Municipality of Rome started an experiment in telework practice involving 35 employees from various professional frameworks and eight different administrative units in June 1996 after a planning phase of six months, and finished it in December 1996. It was the first of its kind to be carried out in an Italian public administration and converged two main interests:

- A research group (Innova Int., S3Acta, Fondazione ugo Bordoni, DS Graphics Engineering) carried out an analysis and experimentation programme in Rome, namely Rome TraDe Project (Traffic Decongestion Teleworking Programme), which is estimated as a useful evaluation field of telework as an instrument to European Union environmental policies;
- The Municipality of Rome in conducting a telework pilot project within its own organisation, is considered as an important institutional and technological precedent.

Regulations

Normative and contractual frameworks which govern municipal employment in Italy concede few opportunities to telework. Therefore a special Municipal Council Resolution (n°2479/96) addressed the approval and regulations of the telework experiment involving the head of Municipal Personnel (senior staff). The resolution widely focused on similar experiments in other European capitals, emphasising the pilot character of the initiative and the voluntary character of participation. Within the Municipality of Rome a telework Support Committee was formed in order to provide the co-ordination of the programme between managers of the units involved and with the companies of the consortium.

The personnel department was involved in the programme as well. In fact, the head of personnel and the area director made the decision to begin the experiment before the regulation was approved, electing six officers from their department to participate in the experiment. Relations established with union representatives were concerned with mediation and not with negotiation.

Various informal exchanges allowed for the negotiation of critical aspects of the regulation, such as requesting the exclusion of methods of evaluation of productive performance, which was stipulated in the original proposal.

Implementation

The following departments were involved in the pilot project: The Mayor's Cabinet, the Department for Cultural Heritage, the Department for Juridical Policies Department, the Department for Information Systems, the Immigration Office, the Department for Organisation and Training, the Department for Public Work and Urban Maintenance, and the Pollution Office. Originally training courses were planned for teleworkers, but actually postponed due to the limited time span for the pilot project. Main work areas conducted as telework have been administrative and management tasks, bibliographical and technical research on data banks, data processing and software development activity, planning, accountancy and personnel management. 51% of the teleworkers carried out mobile teleworking, 49% worked at home, and 26% worked in telecentres. More than 600 working journeys were monitored and the average teleworking day in a week was one and a half.

Obstacles

Communication between teleworkers and their bosses was somewhat affected, and communication between teleworkers and their colleagues has substantially decreased. However teleworkers did not suffer from isolation. In some cases telework represented a solution to the lack of IT equipment in different departments.

The union representatives expressed strong reservations. It is foreseeable that negotiations will be more complex should there be any new initiative. Critical themes which are being discussed at the moment (worker isolation, production control, piecework, the slackening of guarantees, restructuring productive processes, globalisation of labour markets) brought up significant differences of attitude and approach.

Lesson learned and outlook

The experience of the pilot project made quite apparently following positive achievements:

- public administrations can be open to organisational and technical innovations;
- flexible schemes of work organisation can suit the needs of public administration tasks;
- the experiment increased the general interest for new forms of working.

The expectations concerning work organisation (to improve and optimise work management, interaction and flexibility with the other colleagues) were fulfilled. The project has proved the reduction in commuting and travel costs.

Case No. 10: The Netherlands - The Rijkswaterstaat, North Netherlands (Ministry of Transport, Public Works and Water Management)

Policy environment

Early telework pilot programmes were implemented by several IT companies in the late 1980s. By the end of 1995, 22% of Dutch private companies were offering their employees the possibility of distance working, in particular larger companies: in two thirds of companies with more than 500 employees distance working is facilitated.[51] Network technologies also increasingly gain importance as domains for public and political debates. These 'Freenets' or 'Digital Cities' are organised by private actors and supported by government.

In 1995, the Ministry of Home Affairs initiated an Internet discussion regarding a new White Paper on informatisation in public administration. Since 1990, the national government has been among the leaders in Europe as regards telework deployment. Within a national action plan for the development of the Information Highway launched by the ministries of Economic Affairs and of the Interior, telework within governmental departments is promoted and realised. At ministerial level, guidelines were produced which deal with voluntariness, rules for the termination of telework, criteria for decision-making whether or not to implement telework, the number of teleworking days and flexibility of working hours, the employers' responsibility for the workplace and teleworker's availability, equipment required, compensation for expenses, and data security procedures.[52]

At present we find full telework implementation in the Ministry of Transport, Public Works and Water Management (600 teleworkers) and in the Tax Department of the Ministry of Finance (105 teleworkers), pilots in two further ministries and the intention to conduct trials or extensions in a further eight government departments.

Frissen (1997:115) has identified two major effects of wide spread intra and inter-organisational electronic connections in the Netherlands. Firstly, one rationale behind a deployment of ICT all over Dutch public administration is 'to detect social security and tax fraud', whereby the issue of privacy as intensively discussed in the 1970s has disappeared from the political and public agenda. Reflexive capacities of public administrations will increase. Secondly, growing correspondence between electronic networks and policy networks or configurations leads to a horizontalisation of relations. Policy-making, then, is less hierarchical in nature. As a result, the so-called 'primacy of politics (for instance the concept of ministerial responsibility) is at stake.

[51] Statistics Sweden - SCB (1997), p. 19.
[52] see Huws, Ursula (1997), p. 16/17.

The case

Background and motivation

There are 660 people working for the division North Netherlands of the Rijkswaterstaat, which belongs to the Ministry of Transport, Public Works and Water Management. The main tasks of the division are the general outline of traffic policy and safety as well as the construction and maintenance of highways and canals. A telework trial started in 1994. As in the case of the Federal Office of Surveying in Austria, telework was triggered by an organisational reform. Here, three offices in North Netherlands were merged into one. Further motives for the introduction of telework were the retention of staff members by being able to cope with individual perspectives on changes in the employees' lives, and the reduction of commuting time.

Implementation

Currently 70 employees out of a total of 660 are regularly doing administrative work, writing papers and reports and carrying out desk research one and a half days per week at a distance from the main office. A quarter of them work on remote office sites, three quarters practise alternating homebased telework. Nine of ten teleworkers in this male dominated work environment are men. The individual benefits of reduced commuting time together with environmentally smooth traffic reduction, are objectives which the representatives of the administration have been promoting in seminars, publications, radio and TV interviews. Advice is given to central government and local authorities. The organisation won a European Telework Award for the Best Contribution to Sustainability in 1997.

From certain aspects the case is notable for amazingly simple solutions, for instance, employees dealing with financial (confidential) matters are excluded from teleworking. At least from the organisation's view the introduction of telework must have been rather inexpensive. The employer lends equipment to the teleworkers or asks them to purchase it themselves.

Obstacles

The only interviewee in our investigation, the Waterstaat's telework manager replied to the question thus: ‘We have no particular problems.’

Regulations

The majority of teleworkers are fully employed, 15% are permanent part-time staff. A core time for being reachable by phone (10.00-12.00hrs and 14.00-16.00hrs) and the maximum of two days per week spent by teleworking are regulated by individual contracts.

Lesson learned and outlook

The main achievements reported from this telework-scheme were a reduction of employee travel, improved internal communications and increased productivity. An extension of the telework scheme was expected. If all the plans are fulfilled, central government in the Netherlands would have employed about 2,200 teleworkers by the end of 1998.

Case No. 11: Sweden - The 'Gatu och fastinghetskontoret' of the City of Stockholm

Policy environment

Already by the late 19th century, the communications revolution had noticeable effects on Swedish society. Around the turn of the century Sweden belonged to one of the leading countries regarding the use of the telephone. Nowadays, Sweden is a leading Member State in infotech infrastructure. It is the fifth largest exporter of telecom equipment in the world after the USA, Japan, Germany and UK. Ownership of PCs, modems and mobile phones is high, while the rates for virtually all telecommunication services are among the cheapest worldwide.[53]

It does not matter which of the many different statistics on telework penetration we consider, as all of them show Sweden as having the highest proportion of teleworkers within the national workforce in Europe. The DG XIII status report on European Telework estimates a proportion of 3.77% of teleworkers in the national workforce in 1994[54], recent calculations identify even 18% or 700,000 people of the Swedish labour force as teleworkers. However, it should be noted that here the definition of 'telework' is a very generous one. It refers to work carried out at least 2 hours a week from home or other temporary workplaces, with or without the use of ICT.[55]

In 1994 the government appointed a national IT Commission whose goals are 'to follow, initiate and support the development of a society in which IT is a natural and integrated tool for all, providing opportunities to improve the quality of our lives, strengthen democracy and thus improve Sweden's competitive position.'[56] Within such a comprehensive programme, the Commission advises the government and focuses on a wide variety of issues: development of a sound infrastructure, job creation, electronic commerce, training and education, the integration of disabled people, and the specific challenges of work in remote areas.

At present Sweden's economy is undergoing serious structural changes. The employment rate is at the average level of the European Union, which in comparison with the Swedish experience during the last decades is high. Furthermore, an economic backlash in comparison with the Scandinavian neighbours has become a matter of shared concern.

Telework is regarded as an element in efforts for modernisation and re-organisation, whereby the Swedish political culture favours models which find a consensus among different social actors. The unions SIF and TCO have chosen a pro-active approach to telework. The TCO, representing most of the teleworking employees in Sweden, underlines the importance of a written contract between employer and employee. Guidelines developed by TCO refer to the voluntary character

[53] Invest in Sweden Agency (ISA) (1997), p. 13 and 16.
[54] European Commission, DG XIII (1997), p. 20.
[55] Engström, Mats/Johanson, Rickard (1997).
[56] Government Official Reports/Ministry of Transport and Communications (1997).

of telework and the vision of a win-win situation for employer and employee. Equal treatment for on-site staff is demanded, a frame for the availability of teleworkers is proposed, the employer's responsibility for purchasing equipment and covering insurance is suggested. The union is currently working on a collective agreement[57] and has issued guidelines for home-based teleworking environments.[58]

Among the 78 European 'good practice' telework cases presented at 'Telework 97' in Stockholm, several Swedish examples from the public administration could be found. The administration of the Swedish Parliament has conducted a pilot with ten participants. Stockholm County Council has established an electronic network for healthcare and medical services which serves also for administrative staff. In the Umea Social Welfare Services 15 people, social workers as well as administrative staff conduct home-based telework. And the Environmental Office at Linköping Local Authority has set up a pilot mainly to study the effects on employees as well as potential environmental benefits.[59]

An investigation carried out by the Kommunförbundet, the association of local authorities, in 1997 reveals that in 17% of the municipalities telework is practised by about 140 civil servants, another 11% have developed solid plans for its introduction.[60]

The case

Background and motivation

The 'Gatu och fastighetskontoret' is in charge of maintaining and planning Stockholm's roads and buildings. The entire unit employs 1,100 people. The telework pilot was inspired by a project carried out by the Swedish agency for technology NUTEK, with the aim to stimulate distance working and the decentralisation of ICT-based services. One of the administration's main motives behind the pilot has been the search for creative solutions to improve co-operation within the administration as well as with customers and suppliers.

Implementation

The pilot which started in 1995 and had its final evaluation in June 1998, was prepared in cooperation with the unions SACO and SKTF. Three to four times more employees wanted to telework than were finally selected by the senior management. In five departments with 265 members eleven employees work three days per week at home. The majority of these teleworkers are in managerial positions, one is an economist, two are park engineers. Further goals of the trial, namely an improved management of work and private life, have been perceived as a success as well as increased efficiency.

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[57] Huws, Ursula (1997), p. 14/15.
[58] TCO-The Swedish Confederation of Professional Employees (1997).
[59] http://www.nutek.se/telework97conference/cases/
[60] Unpublished study by Lars Ericsson, Kommunförbundet.

Changes of work patterns and productivity were evaluated and documented carefully. Regular interviews with staff members were carried out, and the teleworkers themselves contributed with self-assessment. They used diaries to assess potential improvement and productivity increases.

Regulations

Work arrangements in contracts between employer and employee regulate issues such as the organisational affiliation of the teleworker, definition of tasks, duration of participation and period of the trial, availability, technical support and the management of office costs. Special attention is given to matters of OHS comprising ergonomy, accidents at work and safety of equipment.

Obstacles

Not all of the pilot's goals were defined precisely at the beginning. This was partly due to difficulties regarding the technical applications.

Lesson learned and outlook

A partnership approach and broad participation in permanent assessment seem to be major elements of this success story. Continuation and expansion of the scheme are expected.

Case No. 12: United Kingdom - The Surrey County Council

Policy environment

The use of information technologies in general as well as teleworking is quite widespread in the UK. According to the TELDET study, 4.54% of the workforce were teleworking in 1994. More than a half million of teleworkers have been identified. This high degree of teleworking can be attributed to following encouraging factors:

- telework has been an important issue on the political agenda for more than 15 years;
- competitive telecommunications environment (deregulation began in 1984);
- two major telecom operators (British Telecom and Cable & Wireless) have started teleworking programmes both for their own workforce and for customers;
- liberal employment regulations and co-operative trade unions.

Parallel to several studies commissioned by the Department of Transport, Department of Employment and Department of Trade and Industry into various aspects of teleworking, local and regional agencies have implemented a number of telework projects under EU initiatives. Britain's network of telecottages and telecentres was developed in the early 1990s. The TCA (the Telework, Telecottage & Telecentre Association) is the most developed telework association in Europe. It is a non-profit body with elected directors. It produces a bi-monthly magazine and recently published a comprehensive telework handbook.

The City of Sunderland Partnership can be seen as a representative example of the development of an entire telematic strategy including some core themes. The partnership must bring new

telematics-related employment opportunities to the city and ensure that the potential workforce has appropriate up-to-date skills. The strategy was divided into following sections: the intelligent city, education and training and business. The benefits for citizens are to enhance the ability to participate more fully in local affairs, better awareness of entitlement to social security benefits, improved communication with local authorities, and improved access to library and information services.

The MSF (Manufacturing, Science and Finance) trade union has produced Teleworking Guidelines, and a number of other trade unions and the Trades Union Congress have issued reports on the subject. MSF has also set up a Teleworking Interest Group to examine how it can meet the needs of teleworker members running their own businesses, covering topics such as help and advice on cashflow, health and safety, taxation, legal issues and other small business problems, as well as offering discounted business equipment, travel and insurance.

The case

Background and Motivation

The telework pilot project of the Surrey County Council implemented various projects to develop a new strategy of working organisation. (Epsom Telecentre, Surrey Audit Service, Information Systems Services, fundamental property review). 220 out of a total of 3,400 office staff started voluntary teleworking at home and at telecentres.

As a result of an extended review of services and management practices a new vision of working practices was set up:

- reducing reliance on inflexible and expensive offices and encouraging modern working styles;
- ensuring that staff are well managed and trained to work better as a team;
- making use of new technology to improve the ways the Council keeps in touch with those it serves;
- getting the best possible value for money by offering competitive services;
- providing leadership to all who seek to serve the public.

The case for new working practices is driven by three major factors:

1. the needs of customers.
2. the needs of the staff who are regarded as the Council's most valuable resource and who must be supported and developed to meet the Council's customers.
3. the constant and tightening pressure on budgets which means that all expenditure must be tested for the value it adds to front-line services.

The full programme ran the beginning of April until June 1998. This enabled the results to feed into an action plan for endorsement by Policy and Finance Committee in July 1998.

Implementation

Surrey County Council has been through an internal evaluation of its services. The so-called 'New Surrey Workstyle' will be combined with a people strategy action programme to improve management and support for staff. It aims mainly at best practice in using buildings and information technology more efficiently to help staff work more effectively. A new direction for services with a clear focus on service use is required. From 83 office buildings occupied by 3,400 workers, a move was planned to a single corporate headquarters, with four substantial area offices which served as the team base for staff who need to be in a broad geographical area as well as those whose work could be based anywhere within the county. Additionally, there 25 local office bases were set up, designed to meet the needs of customers for direct access to Council staff and the needs of employees who wished to work some of the time closer to home. Every workstation in each building was equipped with a standard IT and communication package allowing staff to access their files and data from any workstation, and to receive telephone calls on their personal number at any telephone. Staff should be allowed to choose to work at home.

The 3,400 workers affected by Surrey Workstyle covered a very wide range. Some were essentially office-based administrators, others were professional staff who needed to see customers and partners on a regular basis out of the office. Many mixed both roles over the course of week. Flexible working raises important issues for managers, who need to adopt new practices to manage the workers at distance, while coming to terms with changes in their own working conditions. It is essential for managers to set clear objectives and allow staff the flexibility to meet them.

Regulations

60% of the teleworkers are fully employed and 40% have permanent part-time posts. The contractual framework was based on individual contracts, on working agreements within the administration and on local collective agreements. The teleworkers got special training and matters of occupational health were taken into consideration.

Obstacles

Changes which effect where and how staff work needed sensitive handling, but the evidence from the people strategy research is that the employees did not feel supported by their managers and were sceptical of the Council's ability to deliver the promised changes. This had implications for communications and consultation at the next stage, which could not reply on traditional cascade briefings through the management chain, and also for the implementation strategy. Problem areas were still a lack of computer skills, the cost of telecommunications, invalid legal status of electronic documents, aspects of taxation, and resistance of senior officers.

Lessons learned and outlook

While generally supportive of the case for New Surrey Workstyle, the trade unions expressed their concern that unless these issues were all tackled sensitively and with full staff involvement, the working experience of their members could have (contrary to the aim of the project) deteriorated.

Initial investment would have been required to ensure that the benefits to customers and staff were apparent from the very start of implementation, and act as positive demonstrations of success.

Belgium, Luxembourg, Portugal and Spain

Despite the effort we spent on research activities, no reports about the implementation of telework in a single bureaucracy could be obtained from these countries. The fact that the network of experts and contacts we relied on could not identify cases in these countries, of course, does not absolutely exclude the possibility of the existence of such practitioners. However, we may state that a deployment of telework in public administrations in these Member States is close to zero.

Nevertheless, we gathered information regarding the conditions for the development of telework in public administrations considering the position, activities and policies of major institutional stakeholders. Moreover, singular examples of tele-cooperation and telematic strategies at the local and regional level are presented, providing a potential for further changes in administrative workstyles.

Belgium

A development of telework awareness in Belgium dates back to around the beginning of the 1990s. In the meantime, several large companies like IBM moved on from pilot trials and implemented telework schemes involving up to 80% of staff. The Belgian TeleWorking Association (BTA) was launched at the end of 1994. In the following years Belgacom opened a first satellite office in Ghent with 90 employees from their former central office in Brussels. The first telecentre, run by a company called Innotek, started operation in the town of Geel, providing 15 workplaces for employed and self-employed workers.[61] The Belgian unions have slowly moved from a strictly defensive attitude towards telework to a position where they consider it as negotiable.

According to local researchers, public administrations so far have not presented themselves as telework practitioners. Nevertheless, the shift towards telematic applications, electronic public services has affected the authorities. Changes in internal work organisation as well as with public interaction can be expected.

'High bandwidth government' in Antwerp may be regarded as an example where it seems to be a matter of definition, as to whether or not one feels inclined to see elements of 'telework'. The digitalisation of the local authorities which began in the 1990s has been elaborated in three projects: MANAP, Telepolis, and DMA. Main motives for the digitalisation of the local authorities have been attempts to catch up with IT development in the private sector and to improve decision-making and interaction with the public.

[61] see European Commission, DG XIII (1997), p. 27.

The Metropolitan Network of Antwerp (MANAP) is based on fibre optic, and will enable a decentralisation of services back to the cities' boroughs. It is planned that 60% of local civil servants be accommodated. Inter-operability between the town hall, the district houses, administrative buildings, police stations, public hospitals and the universities has been facilitated.

'Telepolis', an information centre as a merger of the City of Antwerp and the Antwerp social welfare department replaced the mainframes of two independent bodies with one. Later the port authorities also became integrated. The establishment of Telepolis resulted in 30% more capacity and saved 40% of operators, whereby the entire project emerged without the loss of jobs.

Digital Metropolis Antwerp (DMA) is the project name for the public interface of the local authorities. Citizens are regularly invited to express their opinions on certain political issues in the electronic domain, while the College of Aldermen can be contacted by e-mail. Three Cybercafes, a cyberbus and information kiosks serve as local hubs for a far-reaching integration of citizens.[62]

Luxembourg

Tele-services and call centres have emerged during the last years, but so far the awareness of telework as a variety of organisational concepts for work is low, and there is no concrete and declared telework policy in place. In general, it is feared that Europe's banking and insurance sector will reduce jobs heavily in the near future. Due to the importance of this sector in Luxembourg telework is a hot issue in the relationship of the social partners. A main concern of the unions is export of work. It is more the domestic European competition of low wage work which is feared than the loss of services to Asia. The UK, Ireland, and the new applicants for membership in the EU from the CEEC countries are regarded as potential major competitors.

Eight national monitoring boards comprising representatives of relevant social interests are established to deal with matters of labour law and flexible work.

According to a recent survey[63] telework is most widespread among providers of information and services for companies ('Activités informatiques et activités de service fournis aux entreprises').

CEPS/INSTEAD, a domestic institute for socio-economic research, participates in a pilot project financed by the European Social Fund that explores the possibilities for a development of telework in five European regions. In the context of this project CEPS/INSTEAD offers qualification measures for potential teleworkers (targeting new technologies of networking and communication as well as individual management of work) and provides facilities for firms to gain experience in teleworking. P&T Luxembourg, the Post and Telecommunications office, has launched a telework trial within its own organisation.

[62] Information provided by Bruno Peeters, Alderman of Communication, Governmental Organisation and Decentralisation, President of Telepolis Antwerp, in face-to-face interview and by a presentation in the framework of Global Village, City Hall Vienna, 27th March 1998.

[63] Source: Houssemand, Claude; CEPS/INSTEAD (1998).

Portugal

The EU has granted Portugal the right to delay full liberalisation of telecom until 2003. Under the current legal monopolies, telecommunication infrastructure has been developed significantly since the late 1980s. The number of digital lines rose from 5 % of the telephone net in 1988 to almost 60 % in 1994. The market for GSM mobile telephony and paging, already liberalised, is growing rapidly. Nevertheless, telecom tariffs are still among the highest of the OECD-countries, installation of new lines involves a considerable waiting period for the consumer, and the provision of Internet services is at a low level.[64]

Except of the emergence of Call Centres supporting clients of banks and insurance companies, telework has not gained much importance as a mode of work organisation, especially not regarding high skill jobs performed in a framework of relative high independence regarding status and interaction with the work environment or customers. For the state of the art technology might be a major factor, but based on a study in the textile industry domestic researchers also draw attention to the cultural pre-conditions in work regimes:

'Of course, Portugal still has a lot to improve in technology and expertise, but one of the big reasons to the registered resistance towards telework deals with supervision. A lot of managers still identify supervision, control and visibility. 'Keeping the subordinates under eyes' gives them a symbolic power and delays any innovation.'[65]

Portugal Telecom is one of a few advanced telework-practitioners, whereby it is mainly services that are decentralised. A pilot started at the end of 1995 with six teleworking operators who have been working from remote sites carrying out tasks like alarm calls, services, collect calls, information (directory) and malfunctions.[66] The event of the 'Fifth European Assembly on Telework and New Ways of Working' in Lisbon in September 1998 was expected to provide stimuli for the host country.

Most important in the political arena has been the approval of a 'Green Paper on the Information Society in Portugal' by the Council of Ministers as presented by the Minister for Science and Technology, José Mariano Gago, to the Assembly of the Republic in its plenary session of April 30, 1997.

Besides the objectives to strengthen the national academic and research network and to prepare schools for the Information Society, a mission team comprising representatives of ministries as well as external experts is in charge of studying and monitoring practical measures in the information and communications fields which concern the relations between citizens and the administration.

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[64] see European Commission/DG XIII (1997), p.39.
[65] Araújo, Emília Rodrigues (1997), p. 390.
[66] see Veloso, Ana (1997).

The Green Paper[67] includes a special framework to stimulate the adoption of ICT in the public administration. As well as outlining future plans, the document is amazingly frank and direct in characterising the attitude of domestic bureaucracy:

'Although there is a great potential contribution that the public administration can make in spreading information and communication technologies in society and the economy, unfortunately that is not what has been happening. The public administration has almost always represented a factor of inertia, easily seen in the difficulties faced in successfully publicising individual initiatives. That is what makes it so important to identify points of resistance and to create promotional measures to make the public administration a central axis of the Information Society in Portugal.'

The Green Paper states that the Government should act as the engine of telework implementation, setting the example. The State, as the biggest national employer, should enter into telework projects. Promoting telework in companies and in the public administration should be accompanied by

- an adequate legal framework;
- an adequate organisational framework;
- an adequate technological environment;
- incentives (such as fiscal benefits).

Spain

The country is struggling with high unemployment rates, particularly among young people. In general, telework in Spain is less prevalent compared to other European countries and has hardly been introduced through employer-led schemes. Despite labour market reform in 1994 labour relations are still comparatively inflexible.

In contrast to central governments wish for telework deployment and a high interest by regional governments and local authorities (as documented by a conference on the issue in Barcelona, November 1997 during the 'European Telework Week'), actual implementation within the authorities' premises has not taken place yet.

Research and promotion tend to target Spain's large SME sector and the entire development of qualification measures and computer skills. Agencies in this field are ECTF Spain, the Asociación Española de Teletrabajo, the Asociación de Usarios de Internet and the Asociación Española de Documentación y Teletrabajo. One of the unions, the Unión General de Trabajadores, has a pro-active approach towards telework and is involved in European projects setting up qualification measures.

[67] http://www.missao-si.mct.pt

In the framework of the city's commitment to the ‘Bangemann-Challenge’ Barcelona is digitising information flows within the local administration. The project ‘Integrated Offices’ uses telematics for inter-operability of different municipal services. To date such offices in ten districts and the City Hall comprise population register activities, local taxes, a vehicle information system, the car fines system and claims.

Rather than targeting changes of work organisation solely within the institution several local and regional governments are focusing their activities on the deployment of telematic applications among their constituents. The City of Barcelona is setting up a digital information system for the citizens, providing public terminals with the aim to establish two-way communications between the administration and the citizens in the future.

The Balearic Islands Government is building up a Telematic Megapark and in the region of Valencia the small town of Villena is planned to mutualise into a ‘Infoville’. A local ISDN network will link at least 10% of the 31,000 inhabitants and encourage electronic banking and shipping, telemedicine and on-line information from the town hall and regional government.

Part Three

Comparisons and Conclusions

In Part One, we already raised the critical aspects of our explorative and short-term approach which mainly lies in the heterogeneity of a small pan-European sample. In most of the Member States the organisations investigated are singular and exceptional cases. In other countries the cases are specific ones among a variety of others. Thus, comparisons have to be interpreted with caution as differences and similarities between organisations, and not as comparisons between Member States. General considerations should be read in connection with the descriptive case stories in Part Two. In the following conclusions, references to the extended sample of 22 organisations it are marked with an asterisk (*).

3.1. Aspects of deployment and penetration

In Part One, we drew attention to the problems in analysing telework penetration. Our overview was neither directed nor capable of quantitatively surveying telework in European public administrations.

To a certain extent, general findings about telework also apply to public administrations in particular. Our field experience indicates that a European north-south disparity regarding telework deployment is reflected also by deployment in public administrations.

We have already stated that telework penetration is dependent upon multiple factors: ICT policy, telecom tariffs and provision of technical infrastructure. Our findings on bureaucracies indicate that besides macro-economic trends towards deregulation, the social and organisational environment based on the political history of different work cultures with different styles of monitoring and control, are immensely relevant. Any interpretations of the Netherlands as an

outstanding example of a high degree of telework implementation in bureaucracies compared with other European countries or judged in relation to other sectors of national economy certainly have to consider the pre-condition of a consensus, reform, and transparency oriented style of governance. A configuration of individual freedom combined with societal control and self-control in other policy areas. Sweden is one of Europe's ICT centres, but the adoption of technologically supported decentralisation and individual flexibility also takes place in a specific work culture with responsibility as part of overall societal responsibility as prior common values.

On the other side and apart from ICT standards, a reluctance against the introduction of telework in Austrian, Belgian, French, Italian, Portuguese or Spanish bureaucracies must be assessed in relation to their traditions of powerful public administrations with elements of persistent top-down governance attitudes in contrast to service orientation. Such a consideration of profound stereotypes could only be a beginning of large scale in-depth investigation, for case stories from different regions and nations do present plenty of similarities regarding values and strategies. Globalisation is also a phenomenon of a globalisation of cultures and attitudes. Across our cases we can see factors such as generation, gender and status influencing friction between new and old bureaucrats, or a common appreciation of individual freedom as a guiding value.

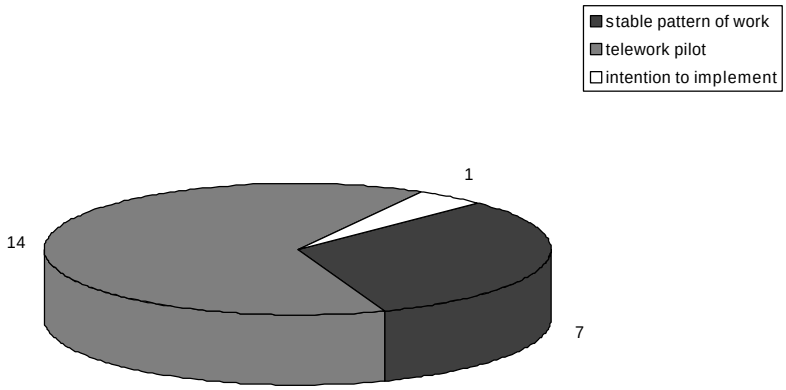
After having criticised the fact that a plethora of definitions of telework is seriously limiting the quality of available data, we do not intend to contribute further to a lack of clarity. We must add self-critically that we as researchers work in a particular institutional frame that tends to provide rather cautious estimations regarding the quantity of telework deployment. From the same institutional background a relatively low estimation for overall telework penetration of Austria has been delivered for the pan-European comparison as shown in Table 2.

Taking these figures of the 1997 DG XIII 'Telework status report' as a frame to estimate the proportion of teleworking bureaucrats among national labour force would, in most of the Member States, mean to leave statistical relevance behind. On the level of local, regional and national authorities we find no or nearly no telework deployment in Belgium, Greece, France, Luxembourg, Portugal and Spain. We find some telework pilots among public administrations in Austria, Denmark, Finland, Germany, Italy and Ireland. We estimate that in the latter countries at maximum two and a half teleworking bureaucrats would be found among 100 teleworkers. Only for the Netherlands, Sweden, and the UK might higher proportions be assumed. Supposed higher penetration whilst lacking statistical proof makes estimations even more problematic. Extrapolating the exact figures from national bureaucracies in the Netherlands to regional and local level, one might estimate that there are between 7% and 10% of bureaucrats among the Dutch teleworkers. The telework optimism of our Swedish colleagues suggests us that this proportion increases to 15.5% in Sweden.[68] Regarding the extent of public tasks outsourced from British administrations and those still being integrated in other Member States might lead to similar high figures for the UK.

[68] Our calculations are based on figures as provided by Hillka Paavonen relying on Engström, Mats/Johanson, Rickard (1997).

Without having covered every potential teleworking administration in Europe, the sample of cases we investigated proves that telework in public administrations is a fairly recent phenomenon. The vast majority of interviewees describe the character of telework practice in their own organisation as a trial or pilot scheme. The earliest practitioner among our cases started in 1993. Country reports and the one third of pioneers with stable telework schemes in our sample tend to indicate a concentration of experiences particularly in the Netherlands and the UK.

Pict. 2: *Level of telework implementation within the sample**



Comparisons of the proportion of teleworkers within the bureaucracies' total work force highlights a gap between a majority, for whom telework is a peripheral phenomenon with very few practitioners, and a minority where the quantity of telework indicates profounder organisational change. 10.6% of the personnel of the Rijkswaterstaat in the North Netherlands conduct telework, 11.3% of the Council of the City of Sunderland.

A typical example of telework at the organisation's periphery is Espoo, a town that employs 10,500 people in total, of whom only three are teleworkers. Such examples are common throughout the French administration, or exemplified by the case of Upper Austria and the Ministry of Social Affairs, Health and Family in Saxonia (Germany). Three teleworkers as cited in Espoo town is indeed a marginal number, but the discrepancy between the number of teleworking and non-teleworking employees appears even more drastic as related to the totality of tasks fulfilled and services provided by the whole community.

In choosing the department or division as a smaller frame of reference, we can roughly distinguish between telework penetration across different units and concentration of telework in a specific one. Our sample shows no specific pre-dominance of either the one or the other. Examples of nearly equal distribution across divisions are given by DG7 at the European Parliament or the Municipality of Rome, an example of a cluster is provided by Shannon Development's Communication Department. The proportion of 15 teleworkers out of Shannon Development's total of 350 employees seems to be small, but they do represent nearly one third of the

Communication Department's labour force. An even higher proportion is given by 10 teleworkers out of 24 employees of the Danish ‘Sagsproduktion’.

Promotion on policy level certainly supports the introduction of trials. Only one of our interviewees defined programmes at EU-level as a trigger. National policy in two cases, regional policy in one and political decisions at local level in seven of 22 cases were seen as stimuli. However, the statements represent the subjective awareness of a particular type of interviewee in a specific position, which is sometimes in conflict with the view that we as researchers might have: It seems as if the direct links between supra-national policy and local initiatives and ‘indirect’ effects of EU-programs were not seen in any case despite of their actual existence. On the one hand, such biases of perception can be regarded as an indicator for the importance of the local community as a point of reference for individual action.

On the other hand, even, if European and national policies are weakly perceived as initiators, activities on European and national level can be and are, in a few cases, used by local telework promoters to gain approval for their endeavours within their closer environment and overrule the danger of rejection by domestic authorities. Support is provided through the opportunity to gain public visibility in the framework of conferences as the annual ‘European Assembly of Telework’ and the ‘European Telework Week’. Other opportunities are publicity given to the winners of the annual ‘Telework Awards’, to the signatories of the European Charter for Telework and to the participants in consensus finding processes on telework implementation. In particular the development of telematic applications on local level within EU-funded initiatives as the Bangemann Challenge, and projects like MUNICIPIA or ACTORES are used as umbrella bodies to raise the likelihood for individual success. In Germany the telework pilots in Federal ministries are serving as flagships for the ‘Initiative Telearbeit’ of the Federal Government; in Denmark the Ministry of Labour directly initiated trials on local level.

3.2. Motivation to telework*

Nearly 70% of our interviewees in intermediate positions said that an improvement of individual flexibility for managing work and private life was expected from decentralised office work. 50% of employees expected savings of travel costs for staff and reduction of commuting time, often combined with a reduction of traffic congestion as a policy objective promoted by the organisation. The same percentage expected a higher level of retention of experienced staff. Only one third proved to be efficiency-oriented by expecting savings of costs for the office.

We often find that bureaucracies use their original key qualifications as major components in telework trials and schemes. For example, for the computer and communication experts at Shannon Development telework developed as a natural side-effect of their existing daily work with advanced telematic applications. The ‘Arbejdsskadestyrelsen’ in Denmark used its special competence regarding injuries at work to carefully clarify aspects of employment contracts, taxes and OHS for the own telework pilot.

The environmental office of one of our 'pre-test cases', the local authorities in Linköping, has studied the reduction of toxic agents per telecommuting member of their own department. Internal and external promotion and monitoring of a reduction in pollution and energy costs is also part of projects as in the North Netherlands, in Rome, Espoo town or in Stockholm. Hence, few of our practitioners, in contrast to proposals coming from literature and EU-funded public events, do not have any ambitions to promote their telework schemes in a public mission.

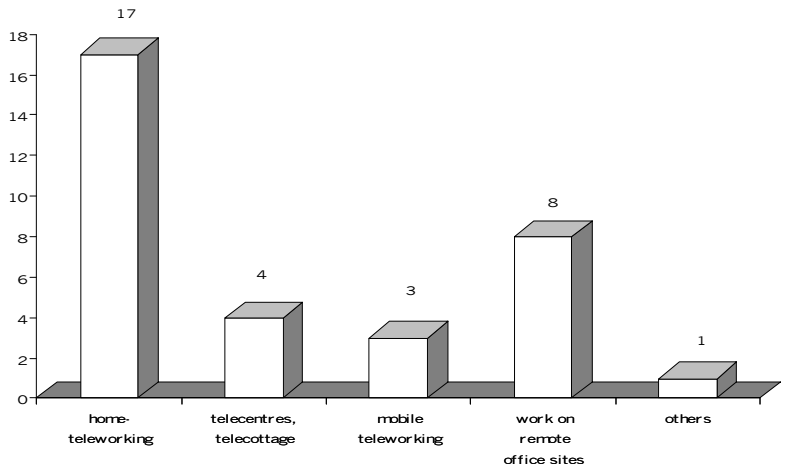
3.3. Aspects of Participation and Partnership

Staff members or their representatives of four out of fifteen organisations have not participated in the decision-making processes for the introduction of telework. In the remaining cases 'participation' has been understood and has taken place in different ways; three interviewees mentioned the voluntary character of telework as a mode of participation. In one case a questionnaire was sent out to the employees. In three cases we find consultation offered to the employees, staff meetings or joint committees of employers and staff. In six cases from Austria, Denmark, Germany, Italy, Sweden and the UK the union's role was explicitly highlighted.[69] In four of these cases agreement between employer and the union's representatives was sought and found already in the early stages of planning the pilots, in one case which is in an early phase of introduction the union and the management are still negotiating. In another of the latter cases a union figured as the initiator of the telework pilot.

3.4. Organisational change*

The most common form of telework among our cases is alternating home-based telework practised by 17 organisations related to 20 valid responses. 14 interviewees name it as the only or dominating practice to work at a distance. 50% of our sample practise a 'telework mix' (homebased, remote office sites, telecentres, mobile). In two out of eight cases work is merely decentralised to remote office sites; in one case to 80%, in an other to 50%. Nomadic work was found in only three cases. Telecentres are used by four administrations: the Municipality of Rome, the administration of the Government of Upper Austria, and two of our three British cases.

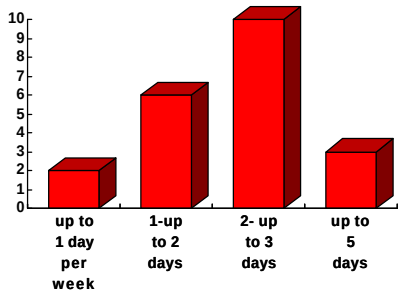
Pict. 3: *Type of Telework (absolute figures, multiple choice was possible)*



[69] As we have not asked explicitly about unions` participation, but more generally about modes of decision-making including staff the actual involvement of a further union might not have been presented in one or the other interview.

One of the analysed national ministries provides an example for an exceptionally low time of absence from the headquarters. One telework day per week indicates that telework serves as the flexible periphery of a traditional work scheme (‘additional telework’). In six cases work is performed between one and at maximum two days per week at a distance. The majority of ten cases deals with an absence between two and three days per week. Both options together show a clear preference for alternating telework. Two of the three organisations where teleworkers show up in the main office less often than once per week practise telework from remote office sites.

Pict. 4: *Distance work in days per week*



In two of our cases the establishment of a telework-scheme has not been the original objective, but one that emerged later to serve as a tool within overall structural change. In both cases the number of office sites became reduced, in one of the cases a reduction of managerial positions is also documented. The remaining office sites ICT linked with the main office were occupied according to the organisational needs and employees' preferences regarding their living environment.

One third of the administrations expected and experienced shifts towards enhanced team and goal oriented work as well as a decrease of interruptions at work. Changes of the interface with the public are not necessarily foreseen. A change or extension of services provided, increased transparency or a better response rate do not tend to be part of the rationale. In single cases telework eases the work performance of disabled colleagues. In general our interviewees say that the administrations do not intend to change their relationship to the labour market, neither do the majority of them think that telework opens them a geographically larger market for the recruitment of personnel, nor is outsourcing or reduction of staff intended. Here, the declared intentions should be interpreted cautiously. To begin with, the majority of our interviewees are IT-project managers, hence, not in charge of the administration's employment strategies. Further, telework is only one element in a general trend towards re-engineering of work processes and rationalisation in the public sector (see 1.1., 1.2., 3.10 and cases). Rather than an isolated phenomenon with ‘original’ impact on employment, telework is an organisational tool to serve goals as primarily set up within a wider organisational and economic frame. Therefore, from our field work we can only conclude that changes of recruitment and employment configurations have not been articulated in conjunction with telework schemes.

Only single organisations among the efficiency oriented ones are advanced enough in their telework experience to have exactly measured productivity. Only the internal papers of one of them offered us an exact number of an average increase of productivity by teleworkers, which was 28%.

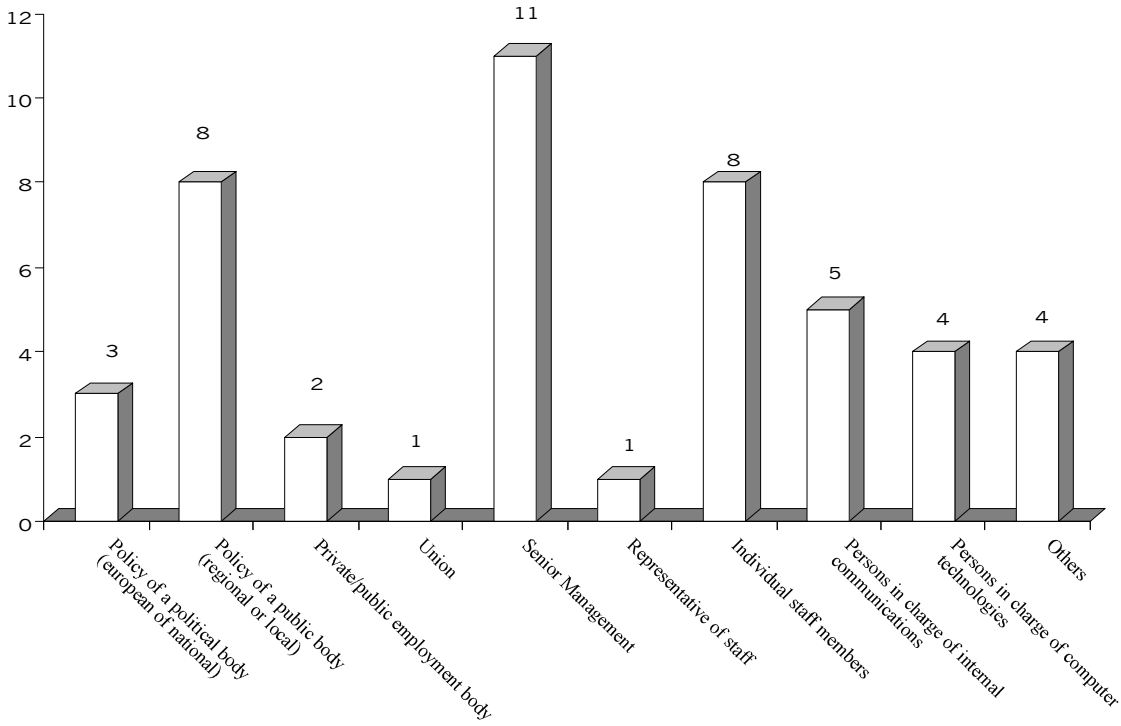
Measurement of results instead of perceived presence at workplace is the major difference between teleworkers and their colleagues in the main office, as observed by our interviewees. In routine work it is easier and more likely to be objectified: number of cases done, number of pages translated and so on. For less standardised tasks regular face-to-face meetings with superiors serve in monitoring as well in agreement of objectives for the next work period and are more flexible.

Our Swedish case shows the most advanced internalisation of work discipline with employees writing diaries, exchanging experiences in staff meetings and investigating individual potentials for an increase of productivity. Diaries have been also in use in the German pilot and served as reliable material for precise and profound evaluation.

3.5. Top-down with bottom-up pressure

The introduction of telework in public administrations can be defined as a top-down phenomenon with bottom up pressure. It is the exception that the emergence of decentralised work has been perceived as a 'self-organising' process. It is seldom that the middle-management of staff managers or IT project leaders regards themselves as the initiators.

Pict. 5: *Initiative for the Implementation of Telework*



(absolute figures, multiple choice was possible)

In 50% of our cases it was the senior management, often in combination with programmatic decisions of political bodies, who gave the initial impulse for the introduction. Other initiators were ‘individual staff members’ (8 out of 22), persons in charge of internal communication (5) and computer technologies (4). In most of the planned pilots participation is on the one hand voluntary, on the other hand the organisation restricts the number of participants. Internal documentation and additional remarks on our questionnaires indicate that in a first, enthusiastic phase of trials the number of volunteers has in several cases been higher than that foreseen by the management. Selective criteria as far as they are made explicit (which is the rare exception) are not coherent throughout our sample and vary among organisations. The decision-making of the management often considers ‘objective’ factors like the distance between the premises and the home-office, seniority of staff members, or ‘inter-subjective’ factors like the personality of volunteers for the pilot.

3.6. Limits of organisational change

One must notice that intentions for organisational change are clearly constrained. Flattening hierarchies or increasing internal transparency are not among the goals to be achieved. Although the higher ranks obviously encourage the start of pilots, in one third of our cases they are identified as a factor in hindering a further expansion of telework schemes. Here we can think of two possible interpretations which could be followed up by further in-depth investigation. Firstly, stimuli in favour of decentralised work often come from specific persons within the higher ranks. Some of the narration of our interviewees comprise sentences like: ‘The former director of the unit...’. Promotion and resistance thus might come from different persons among senior management. Secondly, telework in the political arena of the EU and of some Member States is heavily promoted as a component of institutional modernisation. Thus, a few teleworkers can help to improve the image of the administration, whereas a high quantity could be a critical mass that seriously changed modes of communication and decision-making. Besides ‘unofficial’ complaints about the reluctance of the bosses, some of the circumstances in our study also indicate that telework does not necessarily transform strict hierarchical orders. In one of our potential cases the completed questionnaire had to be approved by several functionaries within the hierarchy. Whilst this report is being written we are still waiting for the questionnaire with the signature of the last of the senior executives.

Further in-depth investigations might focus on detailed discrepancies between intentions and realities and various perceptions of different actors. Although for one third of our interviewees team work belongs to the few appreciated and intended organisational goals, the reality of work practice within the institution might differ. A detailed study within one of the institutions showed that work results of staff members were mainly controlled by themselves or their immediate seniors, but seldom by colleagues on an equal level. As a consequence the institution renounced the use of video-conferencing and joint editing and viewing systems in the telework pilot.

3.7. Tasks*

In nine of 22 organisations secretarial functions for a few days per week are carried out from places other than the main office. In eight organisations we find highly skilled jobs at the top of tasks conducted at a distance: managerial and organisational activities, writing of reports, computer services and research. Data entry as a typically low skilled job is rarely decentralised. Accountancy and financial services also tend to remain within the headquarters which, in single cases, is due to a lack of solutions for data protection.

Internal reports show that in well organised pilots, public administrations following the models of major private companies, tend to base decisions about what type of work is carried out at a distance on the question of which type of personality is applicable to telework. Indeed, personal profiles regarding self-discipline, communicative and organisational talents and so on.. play an important role for the individual and organisational success and failure of telework practice. Whereas the consideration of pre-conditions of personal attitudes is part of the organisational common sense, at the same time knowledge about the teleworkability of specific jobs is rather vague and sometimes a matter of differing opinions between either lower and higher ranks, or IT experts and personnel managers. Only in a very few cases of large bureaucracies have external consultants given a structuring guidance. In many of the pilots the teleworkability of tasks is a question to be found out in 'learning by doing' processes.

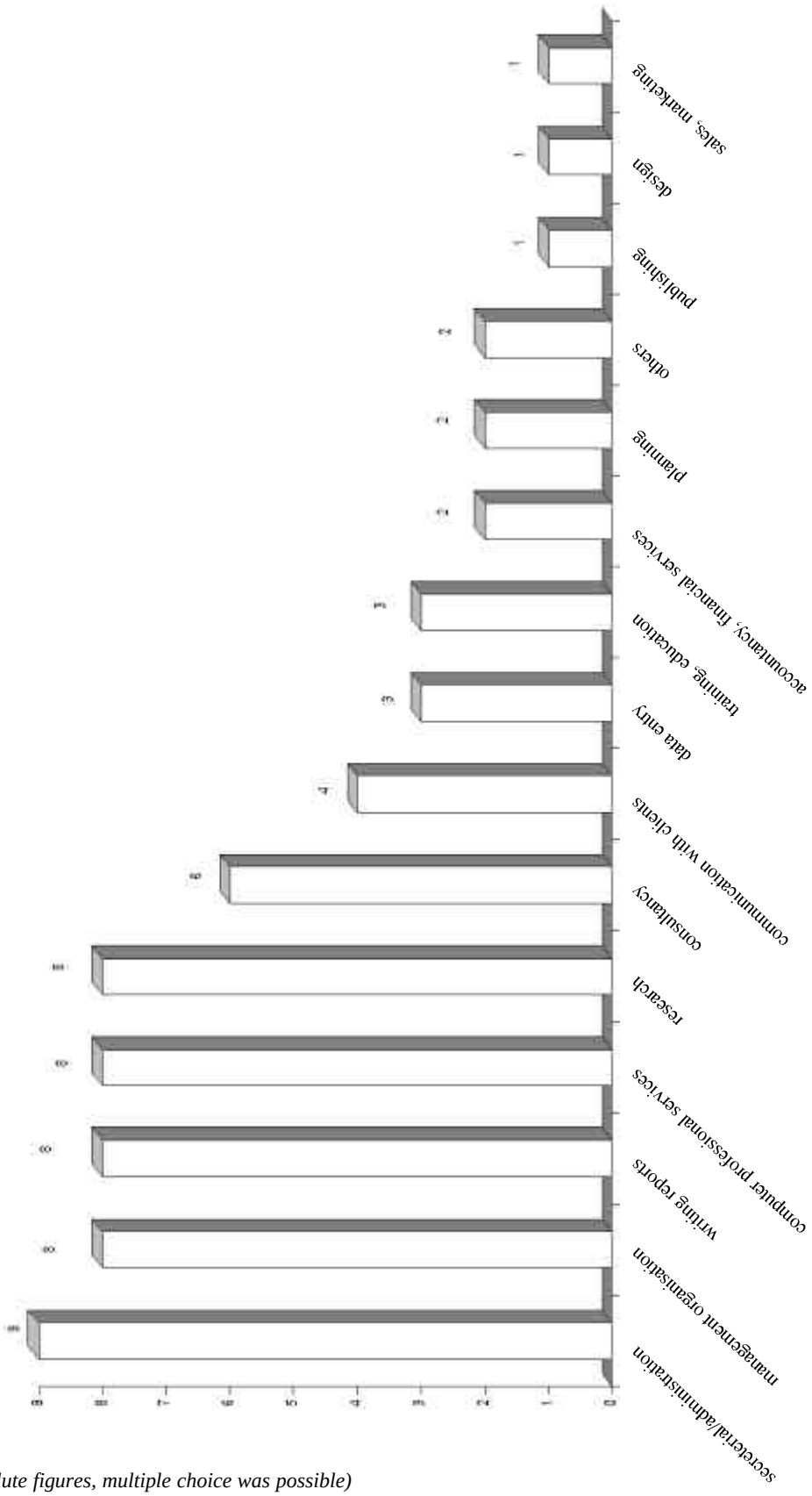
Here, findings of a Canadian study on administrations in a large private firm[70] might give valuable support. Although personality may be an important factor, it is rather the job structure that determines, if work is adjustable to computerised telework. The authors classified work processes as 'hot' and 'cool' to classify the range of control over time and space dimensions of work:

'Teleworkers with cool work processes are not required to respond to others right away. They can decide on their own when and how long to work, and whether to work at home or elsewhere. In contrast, teleworkers in hot jobs must be available for communication and respond immediately to queries and demands of others. As a result, they have little control over the variety of times and places they work.'

Therefore, employees in 'cool jobs' are better suited to the potential of self-control over their work arrangements that telework might allow. Telework and bureaucratic telework itself can further 'cool down' work, where procedures link individual workers to each other through computer mediated spreadsheets or data bases.

[70] Salaff, Janet W. et al (1996) p. 48-52.

Pict6: *Type of Work carried out off-site*



(absolute figures, multiple choice was possible)

3.8. Gender

Due to the design of our research tools and the data obtained we have not received results that immediately and directly showed remarkable differences between female and male teleworking bureaucrats. Nevertheless, overall results allow some interpretations. We have shown that improved balance of professional duties and activities in the private or family sphere is the motive with the highest attraction for staff in public administrations, which coincides with general findings from private companies.

In general, how much the cultural bias to define men as the productive beings and reduce women to the sphere of reproduction is manifested or undermined differs with cultural configurations, between generations, according to supply and stimuli on the labour markets and according to the policies of equal opportunities that are in place. Having such differences in mind, overall experiences indicate that in the case of homebased telework the spatial merging of production and reproduction has different consequences for women and men.[71] Working at home does not necessarely mean that men pick up more duties in the household. In the home-office, men are inclined to underline their professional obligations, whereas woman still devote more time and effort to duties of reproduction.

Technological and organisational innovation not only destroys, transforms and creates jobs. These jobs might be further traditionally occupied either by men, or by women. Automatisation in telephony led to a widespread reduction of female operators during the first two decades of this century. Nowadays, the female operator again gains importance in the framework of call centres.[72]

Following the invention of the typewriter the female occupation of the secretary arose. Nowadays, computerised office automation in combination with telework schemes tends to reduce demands for the secretary as a specific job, as indicated by two of our case studies. Instead, digitisation of work procedures, be it on or off-site, tends to ‘secretarise’ or ‘feminise’ most of the professional activities.

3.9. Data protection

Classical measures of security for work in administrative buildings have become so routine that staff members might not even notice them any more. Video cameras and porters that control the access to buildings and archives, ID cards for staff and visitors, the personal signature that secures authenticity of documents, key words for personal computers. In telework most of these measures become obsolete.

[71] Comments of the Banking, Insurance and Finance Union (BIFU), UK, to the DIPLOMAT guidelines for Labour Relations in telework, see: www.telework-forum.org/diplomat; Internal evaluation at IBM Austria as well as single interviews with female teleworkers.

[72] see Betz, Fritz (1994), p. 38.

Three critical components of data protection are:

a) a loss of confidentiality as soon as data become potentially accessible for unauthorised persons. This refers to the organisation's interests as well as access to electronically stored or transmitted personal data of the teleworker;

b) a loss of authenticity is given when the identity of the sender of information is unclear or, when the sender lacks certainty that information is received by the addressee;

c) a loss of integrity when information whilst stored or transmitted can be modified.

Both the technical system and the worker and his environment at remote work places (in particular the home) are considered for a reduction of risks. Technical problems are identified by one third of the administrations and indicate problems with authenticity and integrity. Securing confidentiality for the majority is not a problem, whereas we feel inclined to add: Not any more. At least internal papers of the technically advanced practitioners show that searches for solutions have demanded considerable effort. Even in the most elaborated cases like DG7 at the European Parliament or the German Federal Ministry of Education and Research teleworkers do not have access to internal computer networks comprising information with top priority.

Solutions can be found on various technical levels: closed ISDN user-groups, firewalls, call-back checks for access to the network, automatic screen-off and passwords for homebased computers. Such complex solutions have been established only by four administrations. In other cases measures for telework do not differ from those at central office. In many cases a simple solution was found. Information with confidential character is excluded from telework schemes. This, naturally, restricts the teleworkability of several jobs. Many of our interviewees underlined the personal responsibility of securing confidentiality.

3.10. Working arrangements*

Most of the teleworkers in our case studies are fully employed; in ten bureaucracies the figure was 100%. Only in the Greek example were no teleworkers permanently employed and working on a part-time basis. In one of our British cases all the teleworkers work part-time permanent jobs (with permanent contracts, but working on part-time basis). In all the other cases between 66% and 98% of the teleworkers were fully employed. In nine cases between two and 40% had part-time permanent employment. The Municipality of Rome is the only case where we find teleworkers as regular self-employed sub-contractors (one fifth of the Municipality's teleworkers).

In general, telework optimists promise job creation, pessimists fear a loss of jobs and disarrangement of regular employment configurations. Our cases are too few, too recent and too heterogeneous to allow any conclusions for a future development in either one direction or

another. As already mentioned above, the statements of our interviewees present a neutral behaviour. Neither reduction nor expansion of staff was intended. Reduction of labour costs, down-sizing and outsourcing do not belong to the preferably articulated aims. Whereas ICTs provide the possibility for work relations across national boundaries, public authorities on national, regional and local level predominantly stick to their territorial boundaries in their recruitment of staff. Hence, transborder issues of telework (the threat of export of work to low wage countries, social security matters and taxation) do not apply to public authorities, at least as long as their traditional reference to territorial sovereignty is expressed by the localisation of their workers within this territory.

Certainly our cases show a variety of working arrangements with different standards of security for the employees. Referring to the general trend of reducing state expenses for the public sector in the last decade, apart from large scale privatisation and outsourcing in several Member States, public administrations have been starting to use cost saving methods of employment like short and medium term contracts and contracts that provide the employee lower or fewer benefits from welfare funds and insurance. Throughout different economic sectors a growth of (often involuntary) part-time work and temporary work can be observed in many OECD countries during the 1980s 'indicating greater labour market flexibility in terms of working arrangements.' (OECD 1994, p. 8/9) Given these macro-trends and a lack of transnational data on ICT deployment in public administrations, the impact of technological and organisational change on employment in this specific sector is difficult to assess.

Contracts

National labour law, in most of our cases, is not regarded as a hindering factor for a deployment of telework by the practitioners. Six out of the 22 cases do not have any further regulations in place which deal with telework in particular. The most widespread practice (16 out of 22 cases) is a working agreement within the administration with the individual and the organisation as partners. In the case of one of the British administrations we found a local collective agreement in place. We asked for the contents of these contracts in an open question. When we compared the replies with supporting documentation we found that the answers given in many cases did not cover all of the actual contractual items. There follow elements of these contracts.

Voluntariness

Voluntariness of participation in a telework-trial or scheme is part of the majority of agreements. The contract used by DG7 of the European Parliament, for example, regulates precisely the methods of how and when to start telework and how and when somebody can return to work in the main office. Often the time span of the telework experience is connected with the duration of the entire trial in place.

In most of the cases telework from both, the employers' and employees' perspectives is not seen as something people would be forced into. On the contrary, it is undertaken and seen as a

‘privilege’. Thus, in pilot phases the selection of teleworkers is expressed often the other way around. The question is not who might be forced, but who is allowed to telework. Here, we have to consider again that most of our cases are fairly recent experiments with the character of a ‘trial’. We assume that in the early phases of pilots the promise of ‘freedom’ (the idea of telework as somehow ‘non-work’) might play an important role (perhaps enhanced in public administrations), whereas it needs a certain time of experiences to get a realistic view on the individual advantages and disadvantages of a new way to work. Thus, the actual relevance of a principle of voluntariness might increase with time and a quantitative growth of decentralised work performance.

Time, place, affiliation, availability

Most contracts define the frequency of absence and presence in the headquarters. In single cases we also find a phrase of confirmation defining the organisational affiliation and position of the teleworker. Rules for availability of the tele-bureaucrats vary to a high extent depending on basic co-ordinates (place and frequency of telework), tasks carried out at a distance and organisational culture in the continuum between autonomous self-control and strict external control.

Results

Some of the organisations clearly define how and when output of work is to be delivered and how it is monitored. Again depending on the type of work carried out at a distance, in these cases we find an implicit expression of ‘Management by Objectives’. Objectives are either defined in individual meetings between teleworker and manager or in staff meetings.

Confidentiality

When dealing with confidential data as integrated in the telework procedures, contracts underline teleworkers' responsibilities.

Occupational Health and Safety (OHS)

Among the 15 organisations there are only two stating that a shift towards telework did not make them consider matters of occupational health and safety in particular. In a few cases a risk assessment of home offices took place. Eight of the 15 organisations (all of them situated in Middle and Northern Europe) cared for the ergonometric adjustment of workplaces and regulated the procedures in the case of work injuries (prevention, burden of proof, insurance). Our findings seem to confirm stereotypes about different national work cultures, for it has been the interviewees from the three Scandinavian organisations that gave the most extensive and detailed statements regarding the issue.

Accessibility of home-offices

Generally, in debates on telework the accessibility of home-offices is seen as one of the critical issues as it might conflict with the principle of the inviolability of the home as part of the private sphere.[73] Modes of accessibility become a question with the employers' responsibility for complying with OHS, and with persons entering the home for technical support. With a few exceptions the administrations in our study tend to avoid the issue. Some of the contracts regulate accessibility. Statements of interviewees indicate that although formally defined the employer has not in every case entered the employees home offices for OHS checks.

Equipment and technical support

The vast majority of employers purchased equipment for their teleworkers' the home offices; some lent it to them. In two cases the costs for equipment were shared between employer and employee. In three cases equipment paid for by the employees was in use. In most of the cases ‘equipment’ refers to computer hardware and software. One of the Scandinavian organisations even purchased ergonometric furniture for teleworkers home offices. Furthermore, office supplies like paper, pencils etc. were provided.

Several contracts regulate the procedures for reliance on technical support, some emphasise the employees' duty to treat equipment carefully, only for professional reasons and to report damage or theft.

Reimbursement

Surprisingly and in contrast to several existing agreements on company level, ‘good practice’ guidelines and union positions[74], only a minority of employers reimburse teleworkers for the use of their homes as offices. Two of them make the amount dependent on managerial case-to-case decisions. Sometimes expenses for telecommunications are compensated. Espoo town in Finland pays 500 Finnish markka per month for phone costs, electricity, heating, cleaning and paper, the Moray Council in the UK offers £300 per year. Another organisation from the UK said that reimbursement would be considered in the evaluation process of the pilot and might be offered in the future.

Emphasis on teleworkers' responsibility

Regarding the contractual situation we find some grey zones of uncertainty, not necessarily with regard to the outline of the legal environment, but regarding the practice of law in a fairly new logistic and technical environment. In such a situation of weakened external and structural control

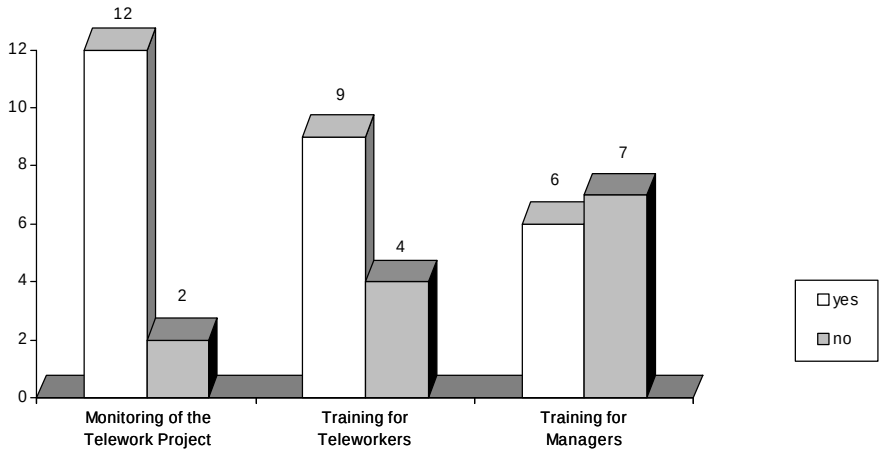
[73] see Huuthanen, Pekka (1996), p. 2.
[74] compare Bibby, Andrew (1996), p. 20/21.

of work it seems as if individual contracts[75] tended to re-emphasise asymmetrically the responsibility of the teleworking individual. This does not necessarily imply an actual increased individual burden. Often the employees' duties as regulated by labour law might be duplicated. Such aspects are the employees' duties regarding confidentiality of information, using the equipment carefully or only for professional reasons, the burden of proof that injuries took place in the context of work, and the employees' contribution to prevention regarding OHS.

Training

Most of our interviewees became rather vague when asked about training facilities. In nearly one third of the bureaucracies specific training for teleworkers had not been offered. Nearly all of the others restricted training to technical issues and offered it only initially. One of the organisations enriched training with aspects of ergonomy, another one considered time management and general communicative skills. Deficits became even more obvious when we asked about training for the managers of telework trials and schemes. It has been considered only by six of 15 bureaucracies, information on contents and frequency of training was marginal.

Pict. 7: *Monitoring and Training provided*



(absolute figures)

When confronting facilities for training with a high number of monitoring measures, it seems as if knowledge about teleworkers gained more importance than giving knowledge to them. Internal evaluation at the German Federal Ministry of Education and Science showed that the teleworkers for themselves particularly defined the need for training in time management (63% of the interviewed) and work organisation (58%). Skills regarding software (40%) and hardware (21%) have been significantly less demanded.[76]

[75] Only one of the administrations provided us with a full document (see Appendix), in all other cases we must rely on the items as listed by the interviewees.

[76] BPU (1997), p. 63/64.

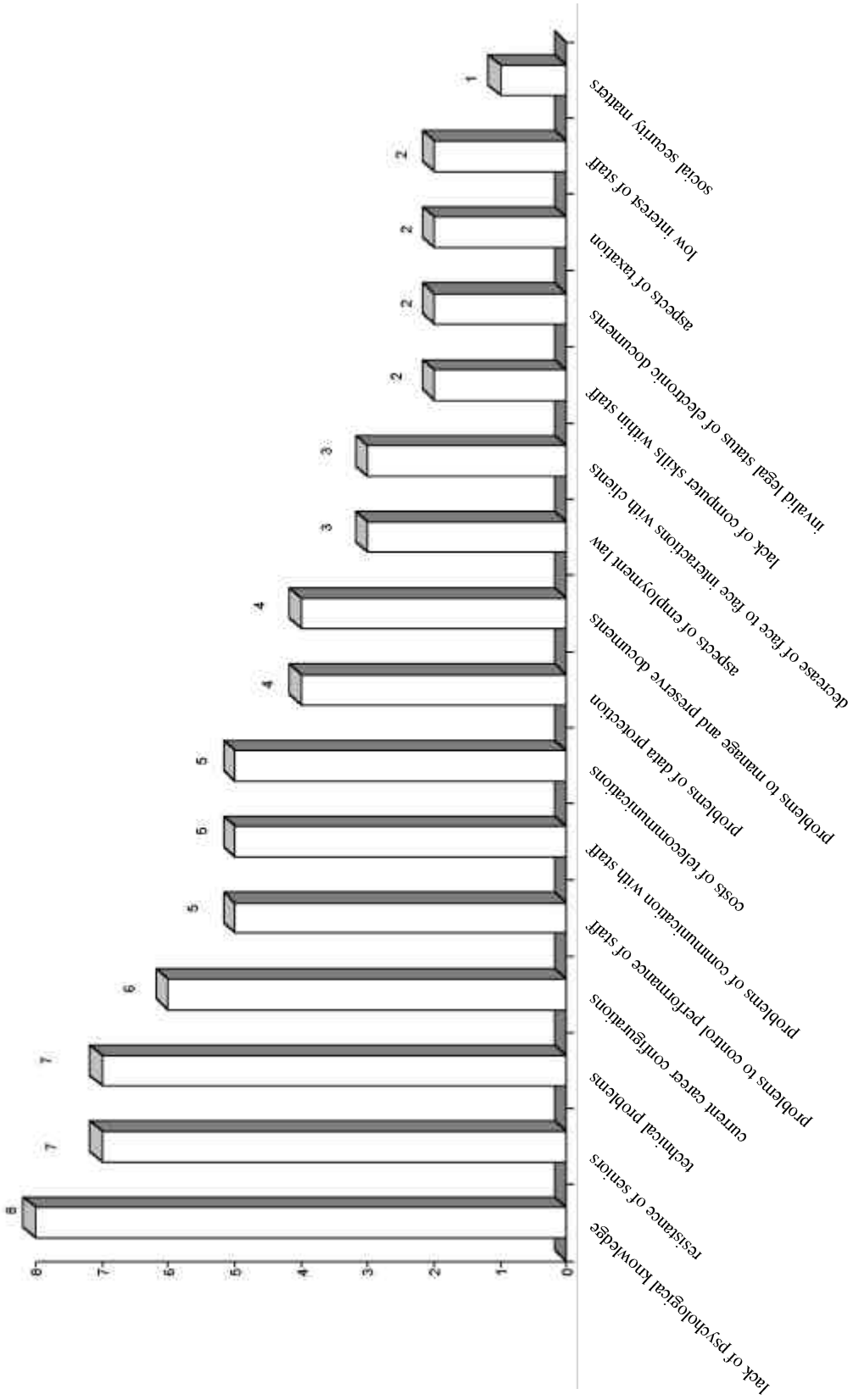
3.11. Obstacles:*

In particular, alternating and homebased teleworkers must deal with new communication orders and spaces: lack of visible control of work performance, increased autonomy and demand of self-discipline, less face-to-face communication with colleagues and seniors, new strategies for the distribution and timing of information, the merging of the spheres of production and reproduction. Training deficits are likely to correspond with one of the major problems identified: the psychological dimension of telework (36.4 %).

This goes hand in hand with another problem. One third of our interviewees identified ‘Current career configurations’ as a hindering factor which can refer to a variety of aspects. Mutual perception of accuracy and presence of work performance in European cultures is linked to physical presence and face-to-face interaction. Teleworkers might not be able to realise job openings and advancement opportunities and have less access to the kind of informal training that workers acquire in contact with their colleagues at work. Especially teleworkers with low skill and low status ‘cool jobs’ (i.e. simple data entry as practised in 15% of our cases) deliver work with low impact on following communication. In the early phase of one of the pilots, part-time workers were formally excluded from teleworking.

For the same proportion of interviewees problems with technology create major obstacles: lack of bandwidth and reliability for transmission, the need to harmonise different software applications within the institution, problems in sharing mainframes and inappropriate hypertext solutions for specific tasks.

Pict. 8: *Barriers for the Implementation of Telework*



Summary

1. Telework is only marginally deployed among Europe's public administrations. Apart from the overall modest state of the art some large scale and elaborated schemes or pilots can be identified on European institutional level, and on national, regional and local level in the Netherlands, Germany, Sweden, the UK, Finland, Denmark, Austria, and in Italy. The Netherlands provides the most outstanding example for coordinated schemes with quantitative impact on national level. In many cases the introduction of the work style is linked to matters of urban planning and the reduction of traffic congestion. In some, it is linked with the integration of disabled people in the work process. For most of these practitioners, the positive experiences outnumber the negative ones and a continuation or expansion of the schemes is foreseen.

2. Main declared motives for an introduction of telework are individual flexibility for managing work and private life, savings of travel costs for staff and reduction of commuting time.

3. Alternating telework with between two and three days per week spent at home was found to be the most common pattern. Regarding the development of telematic applications and office automation, ‘work at remote office sites’ seems to have a major potential.

4. Telework in bureaucracies is a top-down phenomenon with bottom-up pressure. The higher ranks were identified as the telework initiators in most cases and, paradoxically enough, most often as a hindering factor. They figure as gate-keepers for the question of whether or not a pilot remains a marginal experiment serving for a ‘modern’ image of the organisation, or if it gets the chance to contribute to sustainable organisational change.

5. Due to a low number of cases in reality and to the scope of our study a genuine contribution of telework to changes in employment could not be identified. However, transformations of job profiles are likely, especially within public administrations. A reasonable quantity of highly skilled jobs conducted via telework might lead to a reduced need for middle management positions in an organisation. Digitised networking with advanced hypertext applications reduces the need of secretarial positions. Instead, secretarial and administrative tasks become integrated into various types of work, thus, each worker, despite key qualifications is enabled to become him/herself a typist, an administrator and designer of information. This means on the one hand a ‘secretarisation process’, however, on the other hand, telework demands increased autonomous self-management for different jobs.

6. Our cases suggest that a high number of highly skilled tasks are teleworkable. However, teleworkability of tasks still seems to be a matter of ‘trial and error’.

7. Technical problems are among the main obstacles. Protection of the organisations' data is secured by different levels of ‘exclusionary methods’. The most technically advanced practitioners only exclude teleworkers from electronic core networks with top information. Others exclude any confidential material from telework trials.

8. Changes of work styles in public administrations mostly take place in a complex and highly formalised institutional framework. The fact, that changes must be explicitly justified internally and externally may, on the one hand, be a factor for a reluctance against the introduction of telework schemes. On the other hand, if telework is introduced, the existence of a highly formalised structure in bureaucracies makes it more likely that ‘good practice’ guidelines are implemented. We find a tendency towards 'good practice' regarding the existence of contracts dealing with aspects of OHS such as voluntariness, monitoring, appointment of time, place and availability, measurement of results. Less convincing is work practice in respects of reimbursement and training facilities.

9. There is a common deficit of offers of training beyond that related to technical skills and for telework managers.

10. The majority of teleworking bureaucracies do not intend to target organisational change at hierarchies and transparency.

11. Further organisational changes can be triggered by the introduction of telework, but they are not automatically guaranteed side-effects. On the contrary, without organisational preparation and advance changes, telework can become a counter-productive experience for both, the employer and the employees. This needs emphasis especially when it comes to bureaucracies whose development of internal work organisation often lags behind advanced management techniques in the private sector. Telework, on one hand, has the potential to

flatten hierarchies and open spaces for individual creativity. On the other hand, decentralised electronic work can be the basis for rigid control mechanisms and enforced vertical structures.

12. A further deployment of telework in public administrations is likely. Apart from inner European disparities the velocity and extent of such a deployment will depend on the dynamics between conflicting influential factors. Reluctance is mainly due to the specific character of the type of organisation with such specific core values as subordination and loyalty whereby control of time and space for work performance is linked to different positions in hierarchical ladders. In contrast, individuality as an overall ‘post-modern’ core value is of course also appreciated by the members of bureaucracies. Digitisation of information flows and the emergence of virtual networks provide a technical frame with a potential and persuasive character to decentralise work.

Bibliography

Aichholzer, Georg/Kirschner, Andrea (1996): *Telearbeit in europäischen Nachbarschaftsbüros*. Österr. Akademie der Wissenschaften, Inst. für Technikfolgenabschätzung, Wien.

Aichholzer, Georg (1997): *Beschäftigungseffekte der Informationsgesellschaft - Ein Überblick über aktuelle Forschungsergebnisse*, in: TA-Datenbank-Nachrichten; Nr. 2, Juli 1997, p. 26-31.

Araújo, Emilia Rodrigues (1997): *'The Social Dynamics of Virtual Working'*, in: Jackson/van der Wielen ed., p. 386-391.

Bauer, W. et al. (1995): *Telehomework Case Study: Empirical Study on the Conditions and Effects of Telehomework.* European Foundation for the Improvement of Living and Working Conditions (WP/95/58/EN). Dublin.

Betz, Fritz (1994): *Das Schweigen des Karl Kraus. Paradoxien des Medienalltags*. Centaurus: Pfaffenweiler.

Bibby, Andrew (1996): *Trade Unions and Telework*. A Report for FIET, unpublished.

Birchall, D. et al (1997): *Legal, Organisational and Management Issues in Telework*, European Commission DGXXIII-B.

Blanpain, Roger (1997): *The Social Implications of Teleworking - The Social Security Position of Teleworkers in the European Union*. European Foundation for the Improvement of Living and Working Conditions (WP/97/28/EN). Dublin.

BPU (1997): *Telearbeit im bmb+f. Abschlußbericht*. München, Oktober 1997, unpublished.

Bundesministerium für Arbeit und Sozialordnung (1997): *Forschungsbericht 269a, Entwicklung der Telearbeit, Abschlußbericht*, Stuttgart.

Catral (1997): 'Le télétravail dans l'administration francais: bilan et perspectives', in: *La lettre informatique des collectivés locales*, 3 November 1997.

Craipeau, Sylvie/Marot, Jean Claude (1985): *Telework: Impact on Living and Working Conditions*. European Foundation for the Improvement of Living and Working Conditions (WP/85/01/EN). Dublin.

Christiansen, Andreas Haaning (1997): *Problemkatalog til konsensuskonference om telearbejde*.

Centre for Social Innovation (1997): *Sozial kontrollierte Nutzung der Möglichkeiten von Telearbeit*, Studie im Auftrag des Bundesministeriums für Arbeit und Soziales der Republik Österreich, unpublished.

Daniels, Kevin et al. (1997): 'Defining Telework: What is it exactly?' in Jackson/van der Wielen (ed.)

De Massi, Domenico (1995): 'The Human and Social Dimension of Teleworking', in: *Notiziario del Lavoro*. Review of Corporate Organisation and Culture, 13th year, no. 75, Nov. 1995, English Edition, April 1996.

DIPLOMAT (1997), ACTS Programme, AC 222, http://www.telework-forum.org/diplomat

Deliverable D 9, 'The European Charter for Telework'
Deliverables D 14, 15, 15a 'Telework Guidelines'
Deliverable D20 'Deployment of Telework in Europe'

Domanti, Antonio Vecchio / Haines, Mary (1997): 'Experimental Telework Project in the Maritime Sector', in: Hochgerner, Josef/ Buchegger, Barbara (ed.), p. 238-241.

Empirica (1988): *Telework: The Views and Standpoints of the Social Partners and the Workforce and the Potential for Decentralised Electronic Working in the European Office*. European Foundation for the Improvement of Living and Working Conditions (WP/88/15/EN). Dublin.

Engström, Mats/Johanson, Rickard (1997): *Med IT mot nya organisations- och arbetsformer*. KFB. Rapport 97:28.

Ericsson, Lars: *Kommunförbundet*, unpublished study.

ETD (European Telework Development), ACTS Programme AC223, Deliverable D037 'Barriers to Telework', December 1997, Authors: U. Huws and F.E.K.Britton

European Commission (1994): 'Europe's way to the information society: An Action Plan', COM (94) 347, 19 July 1994, Brussels.

European Commission (1996a): 'Europe at the forefront of the Global Information Society: Rolling Action Plan', COM (96) 607, 26 November 1996, Brussels.

European Commission (1996b): 'Living and working in the Information Society: People first', COM (96) 389, 30 September 1996, Brussels.

European Commission (1997a): 'Partnership for a new organisation of work', COM (97) 128, 16 April 1997, Brussels.

European Commission (1997b): The Social and Labour Market Dimension of the Information Society. People First - The Next Steps, COM 390, Brussels.

European Commission, DG XIII-B (1997): Status report on European telework. Telework 1997, Brussels.

Europäische Kommission, DG III, Eurostat (1998): *Panorama of EU Industry 97*, Luxembourg.

Frissen, Paul (1997): 'The virtual state: postmodernisation, informatisation and public administration', in: Loader, Brian D. (ed.), p. 111-125.

Gewerkschaft der Privatangestellten (GPA) (1996): 'Telearbeit. Vorschläge zur Gestaltung'. February 1996, Vienna.

Government Official Reports/Ministry of Transport and Communications (1997): *Sweden in the Information Society*. The Swedish IT Commission. Report 5/97. Stockholm.

Hochgerner, Josef/Buchegger, Barbara ed.(1997): *Telework '96. Working in a wider Europe*. Proceedings of the 3rd European Assembly on Telework and New Ways of Working, City Hall Vienna, 4-6 November 1996. Vienna

Houssemand, Claude; CEPS/INSTEAD (1998): 'Enquete à Luxembourg. Les entreprises et le télétravail', in: *dialogue Luxembourg*. Le periodique de la chambre des employés privés Luxembourg (CEP.L) 1/98, Fevrier 1998.

Huuthanen, Pekka (1996): *The Social Implications of Telework*. Discussion paper on health and safety in telework, prepared for a Joint Commission/Foundation Conference, Brussels, 30-31 May 1996.

Huuthanen, Pekka (1997): *The Social Implications of Telework. The Health and Safety Issues for Teleworkers in the European Union*. European Foundation for the Improvement of Living and Working Conditions (WP/97/29/EN). Dublin.

Huws, Ursula (1993): *Teleworking in Britain.* Employment Department, Sheffield.

Huws, Ursula (1996): *Teleworking: an Overview of Research*. Department of Trade and Industry, London.

Huws, Ursula (1997): *Teleworking: Guidelines for Good Practice*. The Institute for Employment Studies. University of Sussex.

Invest in Sweden Agency (ISA) (1997): *Information Technology*. Stockholm.

Jackson, Paul/van der Wielen , Jos ed. (1997): Amsterdam 97. Second International Workshop on Telework. Proceedings of the Workshop: 'Building Actions on Ideas'. WORC-Report, Tilburg.

Korte, Werner B. (1996): *The Social Implications of Telework. Penetration, Potential and Practice of Telework as well as Labour Law, Social Security, Occupational Health and Safety Issues in Telework and Possible Action.* 22 April 1996, unpublished.

Korte, Werner B./ Wynne, R. (1996): *Telework. Penetration, Potential and Practice in Europe*. Amsterdam, Oxford, Tokyo.

Loader, Brian D. (ed.) (1997): *The Governance of Cyberspace. Politics, technology and global restructuring*. London, New York, Routledge.

Locke, Trevor (1996): 'Teleworking and Local Government: opportunities and strategies'. http://members.aol.com/telework/bp06.htm

Maier, Thomas et al.: *Flexiplace/Mobility of Work*. European Foundation for the Improvement of Living and Working Conditions (WP/95/29/EN), 1994, Dublin.

Martin-Lalande (undated): *L'Internet: un vrai défi pour la France*. Rapport au Premier ministre, unpublished.

Ministry of Research and Information Technology Denmark (1997): 'IT in figures 1996. 23 pictures of the info-society'. http://www.fsk.dk/fsk/publ/it23/

Mitchell, Horace (1998): 'Telework: Status, Development and Issues, in European Information Technology Observatory' (EITO) 98, p. 270-305.

Mitterlehner, Reinhold/Kyrer, Alfred (ed.) (1997): *New Public Management. Effizientes Verwaltungsmanagement zur Sicherung des Wirtschaftsstandortes Österreich*. Österr. Wirtschaftsverlag, Wien.

Moorecroft, Sheila/Bennet, Valerie: *European Guide to Teleworking: A framework for action*. European Foundation for the Improvement of Living and Working Conditions (EF/94/32/EN/DE/FR/IT), 1994, Dublin.

Notiziario del Lavoro (1996): Review of Corporate Organisation and Culture. 14th Year, No. 81, November 1996.

OECD (1994): *The OECD Jobs Study. Evidence and Explanations. Part I. Labour Market Trends and Underlying Forces of Changes*, Paris.

OECD-Statistics Directorate (1997): *Historical Statistics 1960-1995*. Paris.

Österreichisches Statistisches Zentralamt (1997): *Mikrozensus. Arbeitszeitformen. Sonderprogramm*. September 1997, Vienna.

Pekkola, Juhani (1995): 'Telework as an option for work place development'. Unpublished paper for the Workplace Australia Conference, 23-31.5.1995, Melbourne.

Pennings, Frans: *The Social Implications of Teleworking - The Legal and Contractual Situation of Teleworkers in the European Union*. European Foundation for the Improvement of Living and Working Conditions (WP/97/28/EN), 1997, Dublin.

Preissl, Brigitte (1995): *New Landscapes in the Service Sector. Information & Communication Technologies & Structural Change*. Research Paper Series. Aston Business School, Aston University, Birmingham.

Salaff, Janet W.et al (1996): 'Bureaucratic Telework: 'hot and cool jobs', in: *Notiziario del Lavoro*. Review of Corporate Organisation and Culture. 14th Year, No. 81, November 1996, p. 48-52.

de la Serna, Enrique (1997): 'Rome traffic decongestion: a teleworking experience within the city public administration', in: Hochgerner, Josef/Buchegger, Barbara ed., p. 234-237.

Statistics Sweden - SCB (1997): *Statistik om distansarbete 1997*. En lägesrapport pa uppdrag av NUTEK. Stockholm.

Stewart, Brian W. (1997): 'The importance of teleworking to rural development initiatives: The Western Isles Experiment', in Hochgerner, Josef/Buchegger, Barbara ed., p. 147-152.

TCO-The Swedish Confederation of Professional Employees (1997): *A Good Tele-Workplace. Guidelines for the Teleworking Environment*. Stockholm.

Veloso, Ana (1997): 'Isolation and Teleworking: Mutual perceptions of teleworkers and onsite workers', in: Jackson, Paul/van der Wielen, Jos ed., p. 448-458.

Zamindar, Marya (1995): *Telework in Finland. Factors Behind Telework Use Seen from an Employer Perspective*. Ministry of Labour, Helsinki.

Non-Country Specific Web Pages

European Community Telework/Telematics Forum (under DGXIII):
http://www.telework-forum.org

Member State Web Pages

Austria

Austrian Telework Association: http://www.telearbeit.at/

Belgium

Belgian Telework Association (also contact point for Luxembourg) http://www.bta.be/

Denmark

European Telework Week (conference in Denmark): http://www.telework99.dk/

Ministry of Research and Information Technology: http://www.fsk.dk/fsk/publ/it23/

Web site under European Telework Development (ETD), an Initiative supported by the European Commission (DGXIII) as part of the Advanced Communications Technologies and Services (ACTS) Programme: http://www.netapps.dk/ttt.dk/

France

French Telework Association (AFFT) http://www.aftt.net/

Finland

Ministry of Finance; national strategy in information technology:
http://telmo.telmo.fi/tieke/tikas/indexeng.htm

International Telework Foundation (workshop in Finland):
http://www.tucs.abo.fi/events/teleworking/alku.htm

Greece

Greek Teleworking Network: http://www.teleworking.gr

Germany

Bundesministerium für Wirtschaft und Technologie: http://www.bmwi-info2000.de/

Ministerium für Frauen, Jugend, Familie und Gesund des Landes Nordrhein-Westfahlen: http://www.mags.nrw.de/

Gesellschaft fur innovative Arbeitsforum mbH: http://www.ta-telearbeit.de/

Free State of Bavaria 'BayernOnline' initiative http://www.bayern.de

Italy

Web site under European Telework Development (ETD): http://www.mclink.it/telelavoro/

Ireland

Communications Workers Union: http://www.cwu.ie/

Irish Government Press Releases: http://www.irlgov.ie/

Irish Teleworkers Association: http://www.telework.ie/

Luxembourg

See Belgium

Netherlands

Netherlands Telework Forum. Web site under development by European Telework Development (ETD): http://www.ntform.nl

International Telework Foundation (workshop in the Netherlands): http://www.nedernet.nl/amsterdam/page10.htm

Portugal

Associacao Portuguera de Teletrabalho: http://www.teletrabalho.com/ (in construction)

Ministry of Science and Technology, National Initiative for the Information Society

Home Page, Mission for the Information Society: http://www.missao-si.mct.pt/

Spain

Asociación Española de Teletrabajo: http://www.ciberteca.es/aet

Asociación de Ususarios de Internet: http://www.aui.es

Sweden

Swedish National Board for Industrial and Technical Development. European Telework Week (conference in Sweden): http://www.nutek.se/telework97conference/cases/

Distance Forum on flexible forms of working: http://www.distansforum.se/

Swedish Networkers Association: http://www.enter-by.net/

United Kingdom

European Telework Online: http://www.eto.org.uk/

Telework Telecottage and Telecentre Association (TCA): http://www.tca.org.uk/

Union for Skilled and Professional People: http://www.msf.org.uk/

Appendix I

List of interviewees

Public Administration	Name of Interviewee	Position/Department
AUSTRIA		
Federal Bureau for Surveying and Metrology	Hannes Taborsky	Coordinator for Telework
Municipality of Vienna	Ingrid Götzl	Project Manager for the Telework Pilot Municipal Directorate - EDP and Information Strategy
Bundesministerium für Unterricht und kulturelle Angelegenheiten	Christian Dorninger	Coordination of Technical Vocations Schools and Colleges in Austria
Land Oberösterreich	Michaela Schramm	Chairmanship
DENMARK		
Arbejdsskadestyrelsen Sagsproduktion - National Board of Industrial Injuries	Birgitte Svendsen	ADP-Delegate, Sagsproduktion- Handling of matters
FINLAND		
Espoon Kaupunki - Espoo town	Antti Nyberg	Project Manager,Town Planning Centre
FRANCE		
University of Marne la Vallée	Catherine Fabreguettes	Responsible for Multimedia and Electronic Communication
GERMANY		
BM für Bildung, Wissenschaft, Forschung und Technologie	Mr. Mennemeier	Official in Charge of Organization
GREECE		
Research Center of Technological Education Instiute (TEI) of Piraeus	Panagiotis Kikilias	President
IRELAND		
Shannon Development	David Hogan	Communications Executive Corporate Services and Communications
ITALY		
City of Rome	Mauro Miglio	Consultant,Information Systems Policies Department

Public Administration	Name of Interviewee	Position/Department
THE NETHERLANDS		
Minstry of Transport, Public Works and Watermanagement	Hans de Jong	Project Leader Telework; Rijks Waterstaat North-Netherland
Ministerie v. Volkshuisvesting, Ruimtelijke,Ordening en Milieubeheer		
TU Delft		
Belastingdienst/Particulieren Rotterdam		
Ministerie van Lanbouw, Visserij en Natuurbeheer		
Ministerie Volksgezondheit, Welzijn en Sport		
SWEDEN		
Stockholm City	Annika Ljungqvist Kårneryd	Working Environment Expert, Reg I (inner city), Reg V (western part), Reg S (southern part)
UNITED KINGDOM		
Moray Council	David Sim	Senior Telematics Executive, Telematics Unit
Surrey County Council	Mark Cope	Project Manager; Information and Systems Service Surrey
City of Sunderland	Conn Crawford	Senior Policy Officer Information Society; European Team
EUROPEAN INSTITUTIONS		
General Directorate for Translation and General Services (DG VII)	Barry Wilson	Director General, Directorate for Translation

Public Administration	Email/Fax	Person in Charge of Telework (Name, Position, Department)
AUSTRIA		
Federal Bureau for Surveying and Metrology	43.1.21176 2610	-
Municipality of Vienna	ged@mdi.magwien.gv.at	-
Bundesministerium für Unterricht und kulturelle Angelegenheiten	christian.dorninger@bmuk.gv.at	
Land Oberösterreich	michaela.schramm@ooe.gv.at	--
DENMARK		
Arbejdsskadestyrelsen Sagsproduktion - National Board of Industrial Injuries		Steering Group: Management of the Organisation (Deputy Director, Head of Secretariat, Head of ADP)
FINLAND		
Espoon Kaupunki - Espoo town	antti.nyberg@espoo.fi	-
FRANCE		
University of Marne la Vallée	cathe@univ-mlva.fr	-
GERMANY		
BM für Bildung, Wissenschaft, Forschung und Technologie		AG Telearbeit , Staffsection
GREECE		
Research Center of Technological Education Instiute (TEI) of Piraeus	labsdm@netor.gr	Ass. Professor of TEI of Piraeus, Automation Department
IRELAND		
Shannon Development	info@shannon-dev.ie	-
ITALY		
City of Rome	m.miglio@comune.roma.it	

Public Administration	Email/Fax	Person in Charge of Telework (Name, Position, Department)
THE NETHERLANDS		
Minstry of Transport, Public Works and Watermanag.	h.j.djong@dnn.rws.minvenw.nl	-
Ministerie v. Volkshuisvesting, Ruimtelijke,Ordening en Milieubeheer		-
TU Delft		
Belastingdienst/Particulieren Rotterdam		
Ministerie van Lanbouw, Visserij en Natuurbeheer		
Ministerie Volksgezondheit, Welzijn en Sport		
SWEDEN		
Stockholm City	annika.ljungqvistkanreryd @gfk.stockholm.se	Extern Project Manager: Ulf Silven, Datorus Information Systems Internal Project Managers: Martin Skilbåck, RegI, Hans Henecke, RegS; Gunnar Jensen, RegV, P.O. Jågbeck, Egendomsavd
UNITED KINGDOM		
Moray Council	david.sim@edp.moray.gov.uk	Elaine Brown, Resources Officer, Corporate Services
Surrey County Council	markc@surreycc.gov.uk	Steve Myers, Deputy County Fire Officer, Fire and Rescue Service
City of Sunderland	conn.crawford@nion.org.uk or: european.team@sunderland.gov.uk	Janice Whyte, European Teamworker and Coordinator Sunderland Telematics Strategy, Chief Executive Dept.
EUROPEAN INSTITUTIONS		
General Directorate for Translation and General Services (DG VII)	bwilson@europarl.eu.int	-

Appendix II

Questionnaire

1. Background information

Name of the researcher answering this questionnaire: .....

Position: .....

Organisation: .....

Address: .....

City: .....

Country: .....

Tel. No. .....

Fax: .....

email: .....

Name of the administration: .....

Unit (Department/Division): .....

.....

Address: .....

City: .....

Country: .....

possibly: Name of the interviewee: .....

Position: .....

Tel. No. .....

Fax. No. .....

email: .....

1.1. Please, indicate the institutional level of the investigated public administration:

- ❒ international
- ❒ European
- ❒ national
- ❒ regional
- ❒ local

1.2. To which extent is telework practised within the administration?

Please, tick only one of the boxes.

- ❒ Teleworking is established as a common pattern of work
- ❒ Telework pilot in place
- ❒ Intention to implement telework in the near future
  (documented by clear internal decisions, strategic plans etc.)

1.3. When did (will) the administration start to practise teleworking?

Please, indicate the year: .....

1.4. How long was (is) the time span between the first plan and the actual realisation (in months)?

..... months

1.5. Please, indicate the total number of people working for the entire administration.

.....

1.6. Please, indicate the units/departments/divisions where telework is (or: is intended to be) practised.

Name of unit/department/division	Number of persons working for the unit/department/division	Number of teleworkers among them
No. 1)		
No. 2)		
No. 3)		
No. 4)		
No. 5)		
No. 6)		

1.7. Please, characterise the type of work carried out by the respective unit/department/division and indicitate the type of work (intended to be) carried out via telework.

Unit/ department/ division	Description of general main tasks and character of work	Work conducted as telework
No. 1)		
No. 2)		
No. 3)		
No. 4)		
No. 5)		
No. 6)		

1.8. How many men, how many women are (will be) teleworking?

All teleworkers in the entire administration 100 %

- ❒ women .....%
- ❒ men .....%

2. Organisational matters

2.1. Please, estimate how many teleworkers (in % of all teleworkers) are (will be) carrying out a specific type of telework:

All teleworkers within the entire administration 100%

- ❒ home-teleworking .....%
- ❒ telecentres, telecottage, neighbourhood centres .....%
- ❒ mobile teleworking .....%
- ❒ work on remote office sites .....%
- ❒ others .....%

if others, please, specify.....

2.2. How many days per week does (will) a teleworker work at a distance from his/her main office?

Estimate the average.

..... days per week.

2.3. Has teleworking within the administration originally emerged

Tick only one of the boxes.

- ❒ as a result of a declared and explicit internal policy
- ❒ as an informal, self-organising process
- ❒ others (please, explain):

.....
.....
.....
.....

2.4. Who originally initiated the implementation of telework?

Select all answers that apply

- ❒ Policy of a political body on
  - ❒ European
  - ❒ national
  - ❒ regional
  - ❒ local level
- ❒ Private/Public employment bodies
- ❒ Union(s)
- ❒ Costumers
- ❒ Members of other departments/divisions
- ❒ Senior Management
- ❒ Representative(s) of staff
- ❒ Individual staff members
- ❒ Person(s) in charge of internal communication, information management
- ❒ Person(s) in charge of computer technologies
- ❒ Others (specify).....

2.5. For what reasons?

Select all relevant answers.

Work organisation:

- ❒ increased efficiency for the management and preservation of data
- ❒ decrease of interruptions at work
- ❒ improved goal orientation for common work
- ❒ new distribution of work among staff members
- ❒ flatten hierarchies within the administration
- ❒ support of team oriented work
- ❒ accelerate and improve internal communication

- ❒ improve communication with other administrations or departments
- ❒ increased internal transparency of work carried out
- ❒ expansion of services/tasks
- ❒ reduction of services/tasks

Quality of life for staff:

- ❒ reduction of time for commuting
- ❒ improved individual management of work and private life
- ❒ decrease of mental distress
- ❒ increased creativity
- ❒ continued employment despite of changes in private life

Saving of costs:

- ❒ savings of travel costs for staff
- ❒ reduction of labour costs
- ❒ saving of costs for office (heating, space etc.)

Interaction with clients:

- ❒ increased transparency towards the public
- ❒ improved response rate to clients
- ❒ decentralised offers to the public

Staff management:

- ❒ additional job creation
- ❒ job creation or maintenance particularly for members of disadvantaged groups
- ❒ retaining of experienced staff members
- ❒ staff reduction
- ❒ outsourcing of services/tasks
- ❒ a geographically larger labour market
- ❒ others, please specify:.....

.....

.....

2.6. Is the introduction of telework supposed to promote any of the following policy objectives in the public?

- ❒ increasing the proportion of disabled people in the workforce
- ❒ increasing the proportion of women in the workforce
- ❒ strategies for traffic reduction
- ❒ providing a stimulating environment for electronic commerce
- ❒ providing a stimulating environment for distance learning
- ❒ stimulating electronic democracy
- ❒ increased flexibility on the labour-market
- ❒ provision of work to disadvantaged regions or urban areas
- ❒ none
- ❒ others: .....

2.7. If already evident, please highlight which of these expectations (in 2.5 and 2.6) were fulfilled and which not:

fulfilled:

.....
.....
.....
.....

not fulfilled:

.....
.....
.....
.....

2.8. Have the staff-members participated in the decision-making about the introduction of telework?

❒ Yes ❒ No

If yes, please describe:

.....
.....

2.9. Have matters of occupational health and safety been considered particularly in any phase of the introduction of telework?

❒ Yes ❒ No

If yes, which aspects have been considered?

.....
.....
.....

2.10.Is there a (or are there) particular person(s) within the administration in charge of the implementation of telework?

❒ Yes ❒ No

If yes and if not already done on the first page, please, name him/her here:

Name: .....

Position: .....

Unit/Department/Division: .....

Tasks regarding telework: .....

2.11. Are there particular measures for the supervision, monitoring or evaluation of teleworking established?

❒ Yes ❒ No

If yes, please describe them:

.....
.....
.....
.....
.....
.....

2.12.Were or are teleworkers offered specific training?

❒ Yes ❒ No

If yes, please describe character, duration,frequency:

.....
.....

2.13.Were or are team leaders, tutors ot telework-managers offered specific training?

❒ Yes ❒ No

If yes, please describe character, duration,frequency:

.....
.....

2.14.Are the teleworkers results measured in a different way compared with their colleagues working in a traditional form?

❒ Yes ❒ No

If yes, please explain:

.....
.....
.....
.....

2.15.How is the confidentiality of data in teleworking secured?

Please, describe:

.....
.....
.....
.....
.....

3. Employment configurations

3.1. What is the predominant status of employment of the teleworkers working for your organisation (expected to be)?

Select all answers that apply.

All teleworkers within the administration	100 %
❒ full employment	.....%
❒ part-time permanent (permanent contract, but working on part-time basis for example 4 days per week)	.....%
❒ part-time employment (no permanent contract, working part time for example for 6 months)	.....%
❒ hired from agencies	.....%
❒ regular self-employed sub-contractors	.....%
❒ occasional self-employed sub-contractors	.....%
❒ other (please specify):.....	.....%

3.2. What is the contractual framework for teleworking (expected to be) within the administration?

Select all answers that apply.

- ❒ no regulations dealing with teleworking in particular
- ❒ individual contracts
- ❒ working agreement within the administration
- ❒ national collective agreement
- ❒ other: .....

If there are particular regulations for telework in place: Which part(s) of the labour relation is (are) regulated?

.....
.....
.....
.....

4. Equipment/costs:

4.1. Which technical equipment was already in place before telework was introduced? Which equipment was (needs to be) purchased for the implementation of telework?

	was available	purchased for telework
normal office supplies		
single telephone line		
multiple telephone line		
fax machine		
PC (desk based)		
PC (portable)		
computer workstation		
modem		
video phone		
access to Internet		
On-line computer services		
Scanner		
Printer		
Copy machine		
ISDN		
Local Area Network		
others *(please specify)*		

4.2. (Will) Did the administration.

select all answers that apply

- ❒ lend equipment to the teleworkers
- ❒ purchase equipment for the teleworkers
- ❒ ask employees to purchase their own equipment
- ❒ share the costs for equipment with the teleworkers?

4.3. Approximately how much did (will) your administration pay to purchase new equipment and provide initial technical services in total?

In ECU: ..... or: national currency

4.4. (Will) Are teleworkers (be) reimbursed for using the home as office?

❒ Yes ❒ No ❒ home is not used as office

If yes, please explain:

.....

.....

.....

.....

5. Final observations

5.1. What are the main barriers for the implementation or a further expansion of teleworking within the administration?

Select all relevant answers; you may choose more than one of the boxes.

- ❒ problems to manage and preserve documents
- ❒ problems of communication within staff
- ❒ problems to control performance of staff
- ❒ current career and employment configurations
- ❒ decrease of face-to-face interaction with clients
- ❒ lack of knowledge concerning the psychological dimension

- ❒ lack of computer skills within staff
- ❒ technical problems (software, hardware, transmission of data)
- ❒ costs of telecommunication
- ❒ problems of data protection
- ❒ invalid legal status of electronic documents
- ❒ aspects of employment law
- ❒ aspects of health and safety legislation
- ❒ social security matters
- ❒ aspects of taxation
- ❒ low interest of staff
- ❒ resistance of seniors
- ❒ others, please specify.....

5.2. Your estimation of the future development of the numbers of teleworkers within the administration in 1998:

- ❒ increase
- ❒ decrease
- ❒ equal

5.3. Thank you for your co-operation. Please, use the following lines to highlight any further information/comments you think are important:

.....

5.4. List of supporting documentation:

Appendix III[77]

DÉCISION INSTITUANT UN RÉGIME DE TRAVAIL À DOMICILE POUR LES LINGUISTES AFFECTÉS À LA DIRECTION DE LA TRADUCTION

Vu le Reglement n. 259/68 du Conseil du 29 février 1968 fixant le statut des fonctionnaires de l'Union européenne, notamment ses articles 2,20, 34 et 55,

Vu l'article i) d) de la décision du Bureau du 25 juin 1997 déterminant les autorités investies du pouvoir de nomination,

Vu l'avis de la Commission paritaire du 11 mars 1998,

CONSIDÉRANT que le travail à domicile est susceptible de constituer un moyen de gestion approprié des linguistes affectés à la Direction de la Traduction,

CONSIDÉRANT que l'évaluation de la période d'essai du régime de télétravail, après une année d'application, a été considérée concluante.

Article premier

Il est institué, pour les traducteurs, traducteurs principaux et réviseurs (ci-après les traducteurs) affectés à la Direction de la Traduction qui ont le statut de fonctionnaire, un régime de travail à domicile selon les modalités du télétravail.

[77] These rules of DG 7 at the European Parliament are a new and slightly changed version that will be applied after our study was carried out.

Sous ce régime, le traducteur dispose à son domicile d'un poste de travail intégré au réseau de l'institution ou relié à ce réseau par ligne téléphonique publique lui permettant d'échanger des documents, des travaux et des informations en temps réel ou différé avec l'institution.

Exceptionnellement, les textes à traduire peuvent parvenir par télécopieur au traducteur qui, avec l'autorisation de son chef de division, peut remettre ses travaux à l'institution sur disquette.

Article 2

L'institution met à la disposition du traducteur le matériel informatique et télématique indispensable, en assure l'entretien et en conserve la propriété.

Elle prend à sa charge, à l'exclusion de tous autres frais, la fourniture, l'installation, la maintenance et l'assurance du matériel informatique et télématique et des logiciels nécessaires ainsi que les frais d'abonnement et de communication induits par le télétravail.

Article 3

Le traducteur est responsable de la conservation du matériel mis à la disposition et l'utilise exclusivement à des fins professionnelles en respectant les règles d'utilisation prescrites. Il doit prévenir immédiatement l'institution en cas de vol ou d'accident survenu à ce matériel.

Article 4

Le traducteur autorisé à travailler à domicile bénéficie de tous les droits et est soumis à toutes les obligations prévues par le statut, notamment:

a) il est tenu de résider au lieu de son affectation ou à proximité de celui-ci, conformément à l'article 20 du Statut;

b) il est à tout moment à la disposition de son institution et prend à cette fin toutes dispositions utiles pour que sa hiérarchie puisse entrer en contact avec lui pendant l'horaire de travail de l'institution. Il se rend aux convocations qui lui sont adressées et respecte les dispositions en matière d'absence et de congé;

c) il réserve l'exclusivité de son travail à l'institution, ne peut sous-traiter les travaux qui lui sont confiés, respecte la confidentialité des informations recueillies dans l'exercice de ses fonctions et ne les utilise pas à des fins personnelles.

Article 5

La demande de bénéficier du régime de travail à domicile, dûment motivée, est adressée par la voie hiérarchique au directeur général responsable des services de traduction.

Article 6

Si elle répond à l'intérêt du service, l'autorisation est accordée, après avis de l'ordonnateur des crédits relatifs à l'équipement informatique et télématique, par le directeur général responsable des services de traduction.

Elle détermine le lieu du télétravail et prend effet à une date fixée d'un commun accord entre les services de la Traduction, la Direction de l'Informatique et des Télécommunications et l'intéressé.

Elle est notifiée par écrit à l'intéressé, ses supérieurs hiérarchiques, à l'ordonnateur responsable et la Direction générale du Personnel, du Budget et des Finances.

Lorsque le traducteur n'a jamais été admis à bénéficier de ce régime, la décision est accordée pour une période d'essai de 6 mois, éventuellement avec un matériel informatique réduit. A l'issue de cette période et pour autant que l'essai ait été considéré comme concluant par les supérieurs hiérarchiques et par le traducteur, l'autorisation de travail à domicile est accordée pour une durée de 2 ans renouvelable.

Article 7

A l'échéance de l'autorisation et en l'absence d'une demande de prorogation de la décision, le traducteur réintègre d'office les locaux de l'institution.

Il peut être mis fin anticipativement à l'autorisation de travailler à domicile :

- la demande du traducteur, introduite auprès de l'AIPN au moins 3 mois avant la date souhaitée pour la reprise de ses activités dans les locaux de l'institution;

- la demande des supérieurs hiérarchiques, si après deux mises en demeure par écrit le rendement du fonctionnaire se révèle insuffisant ;

- la demande de l'ordonnateur.

Article 8

L'activité à domicile ne peut être autorisée pendant la période de stage prévue à l'article 34 du statut.

Article 9

Le traducteur victime d'un accident de travail doit apporter la preuve de l'imputabilité de l'accident son activité professionnelle.

Article 10

Un bureau commun dans les locaux de l'institution est mis à la disposition des fonctionnaires autorisés à travailler à domicile.

Article 11

La présente décision prend effet à la date de sa signature et annule et remplace la décision sur le télétravail du 4 octobre 1995. Luxembourg, le

Julian PRIESTLEY

European Foundation for the Improvement of Living and Working Conditions.

Deployment of Telework in European Public Administrations: An Overview

Luxembourg: Office for Official Publications of the European Communities, 1999

1999 – 112 pages – 21 x 29,7 cm

The Centre for Social Innovation (CSI)

A scientific institute working in the fields of research, training/further training and consulting. Founded in 1990, its aim is to promote social innovation in a practical way through interdisciplinary and international co-operation and to offer monitoring and evaluation.

'Social innovation' is defined as the development, adaptation or use of an innovation in the social field. This could be, for example, changes in decision-making process due to the changed social compostion of groups involved, new means of communication or new rules applied to the solving of problems. The methodological focus of scientific research and application-oriented analysis and measures is in the field of the social sciences.

Main Fields of Activity

Labour Market and Employment
New forms of work and business organisation; telework, virtual companies, knowledge economy, training and further education; the future of work.

European Research and Technology Policy
Planning and implementation, consulting and evaluation of EU projects; design assistance in the prepration and evaluation of transnational programmes; analysis on European and regional levels.

Life in the Information Society
Changes in social structure caused by competition and changed forms of social cohesion; global chalenges, regional and urban developments of culture, communication, ecology and politics.

Social Integration
Programme of tailor-made courses and consulting to offer training and improve opportunities for marginal groups and structurally under-developed regions.

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