



# ***New Ways of Living and Working: Teleworking in Ireland***

*Report of the National Advisory Council on Teleworking*

June 1999

## Preface

The rate of technological development achieved world-wide during this century has been phenomenal. Many totally new industries have been created, generating new markets and millions of new jobs. The last twenty five years has seen major and pervasive developments in Information and Communications Technologies which are not only influencing and reshaping the industrial terrain and the economic balance between economies, they are also affecting how we work and live. The use of teleworking as a work-style is part of this revolution.

Over the past twelve months we have reviewed much material related to teleworking. We have considered the many submissions received and have attempted to identify the strengths and weaknesses of the current National Information Society Strategy, as documented by the Information Society Commission. This was all with a view to formulating a set of achievable recommendations which, when implemented, will, we believe, lay secure foundations for Ireland to benefit from this most exciting of futures in the Information Age.

I would like to thank my colleagues on the Council for the range of skills, knowledge and wisdom they brought to bear on this assignment. I wish to pay a particular tribute to those of my colleagues who accepted, and executed voluntarily, a range of tasks which included researching and writing sections of this report. Our thanks are also due to the many people and organisations who sent us submissions, made presentations and provided us with a wide cross section of views and recommendations.

Finally, I would like to record our thanks and appreciation to our secretary, Mrs Theresa Fitzpatrick and our editorial consultant, Dr Aedín McLoughlin, who enabled us to produce our report successfully.



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Thomas A. Callanan.

\_\_\_May\_\_\_ 1999

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## EXECUTIVE SUMMARY

### Background

During the last twenty-five years, information and communications technologies (ICTs) have come of age and are influencing and reshaping the industrial terrain and affecting how we work and live. Teleworking is part of this revolution. Teleworking is not an end in itself; it is an essential component/facilitator towards introducing and supporting a new paradigm of work, organisation and trade.

### Vision of the Future

The Council's vision of the future is that by 2010, Ireland will be a world leader in E-organisation and human collaboration, where the talents and culture of our people can be fully expressed; where people are empowered to choose how, where and when to work; where businesses are enabled to sell and trade to the virtual world and an inclusive and geographically balanced economy and nation evolves.

### Current Status

Teleworking is defined in this report as 'a way of working using information and communication technologies in which work is carried out independent of location'. Teleworking is not a job but a method of working. Ways of teleworking include:

- ◆ *Home teleworker* - at home full-time/part-time
- ◆ *Telecentre teleworker* - in remote offices physically distant from 'the office'
- ◆ *Telecommuter* - part-time at home and part-time in office
- ◆ *Mobile teleworkers* - on the move

Teleworking has widespread benefits for organisations, individuals and public authorities. These include flexible working, increased skills access and enhanced effectiveness. Experience of teleworking skills

and processes will be invaluable to all businesses as they migrate to the world of electronic commerce. Other benefits include increasing productivity, promoting flexibility and enhancing their competitive edge. Over the next few years, as the impact of the deregulation of telecommunications and dramatic price/performance improvements takes effect, teleworking can be expected to become a mainstream work-style.

A considerable number of individuals have opted to use teleworking as part of their work routine to reduce commuting, to exercise more control over their work patterns and to achieve a better balance between their roles as part of the labour force and their other roles as citizens of society outside work.

### Regional Policy

Teleworkers can live in the locations of their choice and have greater flexibility as to where and when to work. This means that teleworking can be a major tool for regional policy. It can help to increase employment opportunities outside the ever-growing urban conglomerations. By allowing city dwellers to work at home or move to a rural setting, commuting can be reduced, helping to attain a reduction in pollution, an improvement in the environment and a rebalancing of the economy.

### Telecommunications infrastructure

The pace of development of new telecommunications services and networks will continue to be rapid. One of the most important aspects of creating a telework friendly environment is the provision of universal low-cost telecommunications access. The principle of equal telecommunications rates, independent of distance, should be supported. Also important is the provision of universal access to wideband networks at an affordable cost, especially to SMEs.

## Awareness

There are still significant barriers to be overcome before Ireland can fully reap the benefits of teleworking. The greatest barriers are lack of awareness, relevant training and a fiscal and legal environment that supports teleworking as a method of work. Many in leadership positions (Government, education, business, the unions, development agencies, and community groups) do not appreciate the potential of teleworking skills and technologies and the advantages that can be derived from them.

Moreover, potential teleworkers need to know that having tradeable skills and services, including teleworking skills and being available for work, will not guarantee success; work will not appear without marketing. Significant new and international marketing efforts, both conventional and on-line, will be required on their behalf.

## Education and Training

Fundamental to the awareness issue is the development of a comprehensive education and training strategy. People who lack the basic skills to use information technology (IT) can quickly find themselves excluded from the new opportunities. At a national level it will be necessary to continue to invest in the development and delivery, in the most user-friendly way, of a range of micro-enterprise, teleworking, language and IT education programmes.

Attention needs to be given to programmes for currently disadvantaged groups and at-risk industries. Because training programmes and curricula take time to create, implement and mature, such actions are needed now so that Ireland's competitive position can be maintained.

## Employment opportunities

Already there are significant shortages of skilled IT personnel in Ireland and all

over Europe. The current skills shortage offers significant opportunity to teleworkers – employees and self-employed - operating from and within relevant platforms listed in the report. With appropriate management and support, Ireland can provide a pool of accessible skills to both internal and global markets.

There is great potential for the creation of new business models. New multifaceted telecentres can be set up in designated areas or existing centres up-graded to provide advanced teleservices, to broker them internationally and to research these new models.

## Legislation

Current employment legislation is perceived by many of those engaged in teleworking as unclear and/or complicated. The Council, together with representatives from IBEC and ICTU, has prepared a “Code of Practice on Teleworking”, designed to inform those interested in teleworking, or in introducing teleworking to their firms, on a wide range of issues. It is an integral part of this report.

## Fiscal environment

Steps to facilitating the development of an E-commerce and telework friendly society include the creation of an imaginative tax environment to foster the growth of E-commerce, encourage teleworking and support teleworkers. The approach recommended is to look at taxation tools already in place and adapt where possible.

## Key Actions

The Council has selected a number of key actions that can be implemented in order to obtain the benefits outlined for Irish businesses, Irish regions and the Irish people. These can be found following Chapters 5–8.

## MANDATE AND OBJECTIVES

The National Advisory Council on Teleworking was established by Mr Noel Treacy T.D., Minister for Science, Technology and Commerce in 1998. The Council, comprising of experts representing diverse areas of expertise and experience in the areas of Telecommunications and Information Technology, was charged with the task of:

*“advising the Minister on the development of Teleworking employment opportunities in Ireland and recommending attainable actions that will contribute to the realisation of those opportunities.”*

The Council held intensive meetings over a twelve month period and have formulated a number of recommendations for action. It is now submitting this comprehensive report which meets the following objectives:

1. To contribute to a general awareness of the benefits of teleworking as a way of working, and its potential to support high quality employment opportunities in Ireland.
2. To recommend actions that will:
  - ◆ increase an awareness of teleworking as a desirable option by government, national and local development organisations, employers, employees and contractors;
  - ◆ encourage education and training programmes that enable teleworking employment and support;
  - ◆ create a fiscal, legal, commercial and networked environment that fosters teleworking as a way of working and facilitates new high quality employment in Ireland; and
  - ◆ promote teleworking as a way of enabling the creation of sustainable new jobs.
3. To develop a Code of Practice for Teleworking in Ireland.



## PART 1 New Ways of Living and Working

### 1. VISION FOR THE FUTURE

*“There will be universal access to cheap telecommunications networks; old and young will use these networks to communicate and/or do business.”*

#### The 2010 Vision for Teleworking Ireland

In order to realise the benefits of the Information Age now upon us, a clear vision of our goals and strategies must be developed. This vision must include the potential of new ways of working to improve everyone’s quality of life, while stressing their unique Irish context.

The following is the Council’s vision of this future:

***In 2010, Ireland will be known as a leader in E-organisation and human collaboration, where:***

- ◆ ***the full talents and culture of its people are expressed;***
- ◆ ***people are empowered to choose how, where and when to work;***
- ◆ ***businesses are enabled to sell and trade to the virtual economy; and***
- ◆ ***an inclusive and geographically balanced economy and nation evolves***

#### Cultural changes, new paradigms

The vision assumes in effect a cultural change, seen as a transformational shift by organisations, government and individuals in the way they work, organise and trade. Products and services as we know them will change. Increasingly, products will have short development times and will be resaleable.

Work is expected to become subject to even greater change, careers will change more often and retraining will become necessary at regular

intervals. ‘Lifelong Learning’ will be the norm as people live longer but retire earlier and wish to continue to be active well into their later years.

#### Where is technology taking us?

To understand how this vision can be achieved, we have to look at where the new networked technologies of the Information Society are bringing us.

The speed of change in the Information Age is accelerating and planning for change is becoming more and more challenging. The emerging Information Society is due to a convergence of information processing, telecommunications and new media; technologies and applications; media and content; industries and markets. These convergences are breaking down the traditional paradigms of working methods, location, time and organisation. In the last three years the Internet has been adopted by 90 million users world-wide, by the middle of the next decade this is likely to have grown to 500 million users.

*Human Collaboration* : This term is used by the Council to express the range of concepts emerging as ‘collaborative work tools and procedures’, ‘group-ware’, ‘virtual teams’, ‘teleconferencing’, etc., where people use technology to help them work or trade.

To develop a scenario for 2010, the following assumptions can be made:

- ◆ There will be universal access to cheap wideband telecommunications networks;
- ◆ Old and young will use these networks to communicate and/or do business.

Key developments will include the emergence of Virtual organisations, Virtual communities and E-commerce.

Most of the world's commercial activities will be carried out via telecommunications networks. New skills will be needed. These

initially will emerge from teleworking methodologies and later will become part and parcel of everyday occupations and organisations. Virtual organisations (see below) and E-commerce will be an integral part of industrial transactions. Nations who are leaders in this field will gain enormous rewards.

### New organisational models

With the Digital Age comes the evolution of:

- ◆ virtual organisations,
- ◆ virtual communities and
- ◆ reverse markets

**Virtual organisations** are organisations of various independent members that operate co-operatively (and may have been created) without the constraints of space and/or time. They form part of a wider networked federation, one that links the self employed to global opportunities. An example is the European Telework Development, a consortium of business partners and individuals who work as a coherent organisation to stimulate the beneficial uptake of telework, teletrade and telecooperation.

**Virtual communities** are communities developed around an area of common interest and use on-line techniques (e.g. World Wide Web or electronic discussion groups) to sustain themselves in an atmosphere of trust and real insight. Members with a strong interest in certain kinds of products and services gather to exchange information and experiences and to initiate joint actions. Virtual communities can be formed around geographic, demographic or topical interests, e.g. 'Travelocity', a virtual community that shares global travel and tourism information and services.

**Reverse markets.** The real commercial potential of virtual communities will begin to emerge as they achieve a critical mass of participants and develop rich transaction capabilities. As well as gathering members, they will also attract vendors offering products or services likely to be of interest to members. Virtual communities will create reverse markets - markets in which the customer, armed with a growing amount of information, uses that information to search out vendors offering the best combination of quality and price tailored to his or her individual needs. New mindsets towards product development, marketing, customer service and distribution will be established, as will new relationships with customers, suppliers and competitors.

### New ways of working

For two hundred years or more we have been conditioned to think of work and working in a particular way. Work was localised, regimented, specialised and tightly controlled, subject to a 'command and control' model between employer and worker. Manufacturing always produced a tangible product. Services were seen as supportive of that activity, with an implicit cost.

Now, new ways of working are challenging all of that thinking:

- ◆ New organisational and business models are emerging, requiring new kinds of work and skills, often carried out remotely;
- ◆ Employment potential for people with relevant skills in remote areas is growing;
- ◆ Increasingly, people can choose when and where to work and can work within a global trading environment where time and distance are irrelevant;
- ◆ More and more people are aspiring to sustainable self-employment;
- ◆ Teleworking is an integral part of the new working environment.

## 2. TELEWORKING AS A STRATEGY TO ACHIEVE OUR VISION

“Teleworking is important for implementing the working and living environments of tomorrow and, in particular, for creating the conditions in which a geographically balanced economy and nation can evolve.”

### Introduction

The 2010 vision implies that new ways of working and living have the potential to transform our nation and improve the quality of life for all. Three key components of future organisational activity - E-commerce, virtual organisations and virtual communities will be the influencing features.

The establishment of teleworking as an accepted and typical method of working is an important step towards learning about this new world and establishing the new mindsets required. In a world where physical location or time can be irrelevant to the carrying out of on-line commercial transactions, the arrangements made for work must change correspondingly and must also be on-line.



### Teleworking: definition and examples

The following description of teleworking has been adopted by the National Advisory Council on Teleworking for the purposes of this document:

**Teleworking is a method of working using information and communication technologies, enabling work to be carried out independent of location. Teleworking is not a job but a method of working.**

Forms of teleworking include:

*Teleworker* - at home full-time/part-time

*Telecentre teleworker* - in offices physically distant from 'the office'

*Telecommuter* - part-time at home and part-time in office

*Mobile teleworkers* - on the move

### The importance of teleworking

All aspects of work will be reorganised and remoulded in the emerging Information Society and teleworking is an important and integral part of these changes. Teleworking will play an important role in supporting competitiveness, growth and prosperity, jobs, social cohesion and

<sup>1</sup> Diagram reproduced by kind permission of the Shannon Information Society Partnership Programme (ShIPP)

sustainability, as reflected in the policies and programmes at every level from the village community to the European Union. We are seeing work being organised in new ways to make the most of the skills of individuals and the market opportunities being opened up.

Because of their location independence, flexible teleworking practices open up the opportunity of locating employment in lower-cost remote and rural areas. They also allow disadvantaged groups, such as people with disabilities, to fully participate in the workforce. However, teleworking requires new organisational approaches that are responsive to customer demands, flexible to worker requirements, are location independent and use the latest information technology and telecommunications.

There are two fundamental aspects to the importance of teleworking - as a driver for new ways of doing business and for social enrichment.

*Business:* In looking to the future, the concept and processes of teleworking and E-commerce (including collaboration tools, E-cash, digital signatures, encryption, security, etc.) become fundamental to all commercial activity.

The Status Report on European Telework 1997 states: *'There is a close link between telework and electronic commerce - with on-line trading providing access to new markets and new customers, while telework provides new ways to create and support the products and services these customers require, reduces the cost of provision, and improves service levels to enhance competitiveness'*<sup>2</sup>. Mastering the new skills involved is therefore extremely important and urgently required. This is particularly true for individuals and small enterprises.

*Social enrichment:* Teleworking, as a working method, offers greater flexibility in time or place; in the wider context of living values, it offers a step towards a better balance between our role as part of the labour force and our other roles as members of society outside work.

The great advantage of the new technologies is that they make it possible for each person to establish a life and working style that is very personal and conducive to high productivity and a high quality of life.

**Jim McGovern** is Sales Manager of 3-Com Ireland, which specialises in supplying networking solutions. He uses teleworking to be in touch with his customers as much as possible. Starting from home he logs in to the office at about 8 am and spends a couple of hours dealing with communications and administrative tasks. Then he heads off to meet customers without the accompaniment of Dublin's rush hour traffic. McGovern only keeps a "footprint" at the 3-com plant, working mainly from home using an ISDN line. He has been teleworking for over 6 years and spends 85% of his time away from the office, along with an estimated 90% of his colleagues in 3-Com's sales office. He believes that being a teleworker has never been easier due to technological advances like E-mail and ISDN but warns that teleworking can also be disorientating and isolating without human interaction, leading to drops in standards due to lack of stimulation. Self discipline is vital for teleworkers and the situation at home for teleworking must be suitable - no toddlers or building work in the background! (Business & Finance 29/1/98, Business Contact August 1998)

## Changes in the nature of work

As people and businesses use the Internet and new communications systems as an everyday business tool, they will start to challenge traditional assumptions about what work needs to be done, who should do it, how it should be done and where it should be carried out. There is a growing appreciation of this broader vision of teleworking, replacing the previous narrower perception of teleworking as only being about 'working at home instead of commuting'.

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<sup>2</sup> The Status Report on European Telework 1997

Teleworking is increasingly being understood and applied as opening new opportunities to increase competitiveness, to provide new employment, and to improve the quality of work experiences for individuals.

In parallel with these developments based on teleworking, there is increasing interest and investment in E-commerce - the marketing, selling and sometimes delivery of products and services across networks. There is a close link between teleworking and E-commerce - with on-line trading providing access to new markets and new customers while teleworking provides new ways to create and support the products and services these customers require, reduce the cost of provision, and improve service levels to enhance competitiveness.

## Categories of workers

People engaged in teleworking generally fall into the following normal legal categories of worker:

(i) *Employees*, working under normal contracts of employment (contracts of service) agreed with an employer. The usual rights in relation to matters such as dismissal or redundancy is guaranteed, as well as placing consequential obligations on employers

(ii) *Self-employed*, working under a contract for services with a client or customer. As with other self-employed situations, there is little or no statutory regulation of the self-employed and their rights and obligations are based entirely on the contract under which they provide the services in question.

## Examples of teleworkers

Different models of teleworking can be explored - there is no one working arrangement that suits everyone. Three examples of teleworkers can be described who can be employees or self-employed:

1. Managerial/Professional,
2. Support and Technical Services, and
3. Virtual brokers.

*Managerial/professional* teleworkers. These have a core skill or competency such as journalism, design, architecture, software and multimedia development or accountancy. To become successful teleworkers, such professionals must gain:

- ◆ Platform skills such as the ability to use computers and e-mail;
- ◆ Business skills, focused on the creation and maintenance of networked small businesses; and
- ◆ Communication skills, such as attentive listening, to allow the maintenance of relationships at a distance and frequently across differing cultures, languages and jurisdictions, and the creation and maintenance of trust.

In general the core skills of professional teleworkers are in demand and provide access to a wide geographical market once the above skills have been acquired. Professional teleworkers are often quite happy to operate on a self employed basis, frequently working for several clients simultaneously and able to add considerable value to the raw material they work on before returning it to their client or employer.

**Regina McGarrigle: Mayo Editorial Services.** From her West of Ireland base, Regina McGarrigle services international clients and edits scientific papers, manuals and conference proceedings. She also prepares web pages, deals with authors' queries and prepares camera-ready copy for leading scientific publishers in the US and the UK. She operates from her home outside Castlebar in a room converted into an office. A grant from the LEADER rural development programme allowed her to buy a computer, printer and scanner, and set up the business.

Her business is an excellent example of how her international clients can be serviced through modern communications technology. Provided the skills and ability to deliver quality work at competitive cost are there, the location is not important. (*New Business Opportunities in Teleservices: Forbairt, Telework Ireland, Telecom Eireann, Shannon Development*)

*Technical and Support Services* generally offer specialist support skills to managerial/professional teleworkers and traditional industry. Their IT skills, combined with knowledge of administration, technical, customer service and telephone techniques generally form the basis of this support. Classified in this group are also those who have high level linguistic skills and are employed in multinational call centres.

**KITE (Kinawley Integrated Teleworking Enterprise)** is located in County Fermanagh and is an example of a hi-tech teleworking centre working remotely from its clients. The facility also has high quality on site childcare.

Examples of KITE work projects have been:

- ◆ Data input and reporting including medical, sales and tourism records;
- ◆ Medical and research transcription;
- ◆ Organisation of conferences, events, seminars and workshops;
- ◆ Telephone research and database building;
- ◆ Customised ICT and E-commerce training;
- ◆ Telework consulting.

KITE sourced its work in the USA, European Union, UK and Ireland. KITE won the European Telework Award in 1998 for most entrepreneurial development of teleworking in the EU.

*Virtual Brokers.* This group uses brokerage and associated activities and skills, including the following:

- ◆ They act as 'cyber' intermediaries, linking clients and service/skills providers globally.
- ◆ Their activities can include the formation of teams of networked independent teleworkers for clients.
- ◆ Virtual brokers can also act as marketing agents for teleworkers and telecentres.

This type of function looks set to develop, providing demand and rewards for a new set of

high level skills that have much in common with the personal trading skills which have a long tradition in Irish culture.

## Creating a teleworking environment

In practice, teleworking is a much broader concept than was envisaged by its earliest advocates. In addition to those working at home instead of commuting and those working from telecentres, the big growth in teleworking is coming from the increasing numbers of 'mobile' workers. This category includes a large number of people who, while not necessarily considering themselves teleworkers, use ICTs to work remotely, i.e. away from the traditional place of work. This has profound implications not only for the way work is organised and controlled, but also for society as a whole, as well as for the wider constructed environment.

This new paradigm of work must of course make it possible to work efficiently to meet the needs of the modern global networked organisation. It must promote safe and desirable working conditions, but it must also permit a rich and satisfying life outside the place of work. Used intelligently, teleworking opens up opportunities to a more flexible, family friendly and empowering working life where there is space for the natural world, for our natural cycles and for our real social needs.

Teleworking is a way of working, it is not a job or occupation. As such, from a government perspective, the focus must be on creating an environment where the necessary training, supports and infrastructure are universally put in place to encourage the practice of teleworking as a way to do work and to maximise employment potential. (This will be further addressed in Chapter 6.)

In summary, teleworking is important as a basis for implementing the working and living environment of tomorrow and in particular, for creating the conditions in which a geographically balanced economy and nation can evolve.

### 3. THE BENEFITS OF TELEWORKING

*“With the establishment of virtual communities and organisations, it is envisaged that teleworkers will provide critical added value to future human networks.”*

#### Introduction

If teleworking is not considered in isolation, but placed in the context of current trends in the re-organisation of businesses and the general organisational environment, it becomes clear that, in the future, using teleworking skills will become an integral, rather than an optional, way of doing business and facilitating human collaboration.

With the establishment of virtual communities and organisations, it is envisaged that teleworkers will provide critical added value to future human networks. Organisations, individuals and public authorities will use teleworking to achieve competitive advantage.

This development will arise from organisational restructuring and will include flexible working, increased skill access, up-skilling and enhanced effectiveness. Such effectiveness will come from a range of new teleworking associated skills, including:

- ◆ trust,
- ◆ collaboration,
- ◆ independence,
- ◆ technology ease,
- ◆ focused communication and listening,
- ◆ time management and
- ◆ marketing.

#### Benefits for organisations

As previously discussed, the convergence of computing and telecommunications technologies is transforming the environment within which business occurs and added value is created. The trends include the establishment of smaller business entities with ‘flatter’, more flexible and decentralised structures. These often depend on teleworking services that are location independent and have flexible working hours.

Larger organisations, by adopting formal teleworking strategies, can also use the new communications networks and technologies to achieve competitive advantage in several ways:

- ◆ Asset utilisation, e.g. via ‘hot-desking’, which permits a building to accommodate significantly more than its nominal capacity.
- ◆ Accessing new skills which allow faster market entry and acceleration of the introductory phases for new goods and services;
- ◆ Accessing difficult or closed markets;
- ◆ Utilising time advantages as a competitive edge, including shortened product development, distribution and administrative time.

Utilisation of such strategies generally leads to increased return on capital, greater speed of delivery, decreased waiting time and inventory reductions with dramatic increases in quality and productivity.

#### Benefits for customer service

Teleworking can improve services to customers in a variety of ways and allow highly individualised responses to customer demands. It can allow the provision of a service outside normal office hours or in areas where a company does not have a full time, conventional base. This flexibility also fits in with the new ways in which companies operate. Customers can be serviced 24 hours a day by using employees in different time zones.

It can also lead to co-operative work across national boundaries. Teams of appropriately skilled individuals, who are organisationally integrated and empowered, can work in ‘virtual teams’ to deliver top class global services.

## Benefits for employers

On an **economic** level, teleworking can provide a possible solution to problems of rising office overheads, experienced in office expansion or in situations where a high proportion of office desks are empty at any one time. Recent internal research by Hewlett Packard Ireland showed that teleworking can increase productivity by up to 25%<sup>3</sup>. Relevant factors include reduced distractions and interruptions among teleworkers, as well as fewer commuting problems and a reduction in absenteeism. The Telefutures report<sup>4</sup> quoted figures of up to 50% reduction in sick leave

From a **human resource** viewpoint, teleworking can help reduce staff turnover where highly specialised workers may be difficult to recruit or retain. Similarly, it can be used to attract workers in the case of skill shortages and/or overcome recruitment problems where potential applicants live a distance from the company. Teleworking may also be used to keep in touch with senior executives or key staff who spend a large proportion of their time out of the office.

Teleworking can also contribute to equal opportunities policies. Through the use of teleworking strategies, people with disabilities can be attracted to or retained by companies, allowing those companies to benefit from an extra skills resource, while giving people with disabilities mainstream employment opportunities. Teleworking can also facilitate the introduction of more family friendly initiatives in the workplace.

## Benefits for employment

### Benefits for employees

Under teleworking arrangements, employees are usually required to work certain core hours, when they must be available should the employer need to contact them. Outside of these agreed periods, employees are usually free to organise their own working hours, provided that they can successfully achieve their work quotas.

Teleworking holds many possible advantages as a way of work:

- ◆ It can reduce commuting time to and from work, thereby saving on the expense and time involved in travelling, while reducing stress levels
- ◆ It can give an employee more control and autonomy over his/her working hours and work environment. As a result, teleworkers are often more motivated and enjoy more job satisfaction than conventional workers
- ◆ It can help resolve problems of co-ordinating domestic responsibilities with work requirements
- ◆ Where a company or employee relocates, teleworking may provide an alternative option to redeployment or redundancy. For others, teleworking can facilitate greater personal choice regarding where to live.

In general, teleworking has the potential to increase employment opportunities for and improve the quality of life of many workers.

### Benefits for the self-employed

A major trend in the present business environment is an increase in self-employment. The self-employed status offers more control and personal freedom, higher motivation and productivity, which makes it attractive to some individuals. Teleworking offers the technologies and working methods that facilitate the set-up of micro-enterprises and IT services.

There is awareness of the significant employment potential in this area. However, for sustainable self-employment, a strong marketing function is crucial in the set-up of a teleworking business. It is vital that skills can be sold, that there is a continual market available and accessible and that marketing skills are in use that will connect the individual with the market.

### Benefits of telecentres

Telecentres or remote offices, in rural and urban areas, can provide employment

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<sup>3</sup> Address by Kevin Sweeney (Hewlett-Packard Ireland) at Telework Ireland's Sixth National Conference, November 1998

<sup>4</sup> *TeleFutures* Imogen Bertin and Gerard O'Neill (1996)

opportunities by setting up service and training centres, including:

- ◆ Back office administrative centres, for distant clients/corporate employers
- ◆ Small call centres, usually operating on contract for several clients
- ◆ Virtual offices, providing an accommodation address “front” or telephone answering service for small businesses in conjunction with the provision of secretarial, technical and support services
- ◆ IT training centres
- ◆ Community IT resource centres, offering access to PCs, Internet, photocopying, fax etc.
- ◆ Commuter centres, where workers can avoid a physical journey by making use of IT facilities.

**East Clare Telecottage** was established in 1991 to provide a wide range of computer based office services to businesses and community groups. The telecottage staff are a professional team of highly skilled personnel with a wide range of international experience. Their business support services include:

- ◆ Design and Printing
- ◆ Office services
- ◆ Translation service
- ◆ Computer training
- ◆ Software development
- ◆ Website design

### Benefits for networks of teleworkers

The employment opportunities for independent teleworkers who use new forms of professional networks and collaborative strategies include:

- ◆ Access to new technology and/or expertise
- ◆ Access to international markets - networked teleworking is often a very effective way of gaining access to global

markets, particularly for independent teleworkers. Alliances allow effective marketing of their services in overseas markets by acquiring expertise in the new market from their networked overseas contacts

- ◆ New marketing strategies through development of new services that arise out of pooling complementary skills
- ◆ Strategic alliances between teleworkers can also provide several other additional advantages such as blocking opponents, focusing on core strengths and competing against a common rival
- ◆ Improved access to seed and venture capital through issues of scale/strength.

To grasp these opportunities requires a commitment to radically rethinking the organisational status quo, transforming rather than tailoring the process.

### Skills Clusters

Wordwrights, based in Castleconnell, Co Limerick. Its main business is the design of training and educational courses for large multinational corporations. Wordwrights works through their network of teleworkers to find the complimentary skills necessary on a project by project basis for their clients. This clustering of skills may make it easier to acquire contracts that may be impossible for an individual teleworker.

### Benefits for skills retention

The fast-growing, high-exporting Irish economy is increasingly running into issues of skills retention. This should give an impetus towards teleworking, as many sectors look to retain and recruit groups outside the main population centres or present labour pool. They can use teleworking as a method of accessing those groups.

Employees who might otherwise leave can remain in their jobs, for example if the family moves. Employees who take a career break can

continue working part-time and remain up to date with the business and its methods.

Another skills reservoir is the increasing number of people who retire or semi-retire early and may choose to telework. The uptake of the new technologies is not limited to the young - the highest increase in uptake of web based activities in the USA is now reported in the older population.

## Benefits for the environment

Motor vehicles are a significant source of greenhouse gases, air pollution, noise, and deterioration of the urban environment and health problems. Both the Department of the Environment and the Environmental Protection Agency have acknowledged the environmental benefits of teleworking, including:

- ◆ reduced commuting, leading to less fuel consumption and less emissions
- ◆ reduced traffic congestion, and
- ◆ possible savings in energy use in urban buildings.

Additionally, the benefits to telecommuters include:

- ◆ Reduction in stress levels
- ◆ Reduction in commuting time, and an increase in family/leisure time
- ◆ Health benefits
- ◆ When teleworking - more space, a cleaner environment and financial savings.

A **two-year pilot in Los Angeles** by 500 teleworkers showed cost/benefit savings of \$8000 per year per teleworker, a 30% reduction in demand for office space, 23% reduction in worker vehicle use and 12.5% increase in productivity from the teleworkers. 18% of workers indicated that teleworking was the decisive factor in remaining with their employer. Today 35% of employees use teleworking on a regular basis.

## Benefits for regional development

Teleworking offers the potential for a more equitable distribution of economic activity throughout the country. The ideal of teleworking is that teleworkers can live in the locations of their choice. This implies a significant potential for teleworking to contribute to employment creation in rural and other disadvantaged areas and redress the aggregation of economic activity in our main urban centres.

Teleworking offers the potential of increased small business start-ups and, of significance to Ireland, an enhancement in competitiveness, particularly to SMEs, due to the reduction in overhead costs that home-based working can provide.

That Ireland currently needs a rational regional plan is manifest. In Dublin and several of the other larger cities, rapid urbanisation is leading to mounting costs of business and residential property, traffic congestion, environmental pollution and increasing skills shortages. In our rural areas, on the other hand, there is low population and under-utilisation of existing skills. Lack of economic opportunities in large parts of the country, particularly the west, still lead to under-employment, drift from the land and migration. A major opportunity exists to address this contrast by the initiation of measures, including teleworking, to stimulate economic activity, develop appropriate skills and foster employment opportunities in rural Ireland.

Teleworking, however, is not the cure for all of the problems of the past; neither is the availability of telecommunications sufficient for growth within regions. What is required is a combination of factors:

- ◆ an appropriate telecommunications infrastructure,
- ◆ skills and business development training programmes,
- ◆ awareness campaigns and
- ◆ support services, in particular, marketing support.

Together, these can provide a platform upon which to build a better future for many of the lesser-developed parts of the country. In the process, the paradigm of the past can be reversed, 'bringing work to the people', rather than 'bringing people to the work'.

The telework pilot project of **Surrey County Council** (1994) implemented various project to develop a new strategy of working organisation. 220 out of a total of 3,400 office staff started voluntary teleworking at home and at telecentres.

**Table 1 SOME BENEFITS OF TELEWORKING - SUMMARY**

<b>For:</b>	<b>There are benefits of:</b>	<b>Through:</b>
Organisations	Establishment of smaller entities Access to new markets and networked income resources Ability to trade globally	Lower barriers to entry Improved market access  Micro-enterprises
Customers	Better services	Outside normal hours, Outside normal areas
Employers	Reduced costs  Increased productivity and improved quality Reduced staff turnover  Attractive to new workers  New organisation arrangements	Reduced need for office expansion, reduced 'empty desks' Reduced distraction, Reduced interruption, Fewer commuter problems, Reduction in absenteeism. Offering more satisfactory conditions Offering greater flexibility
Employees	Save time and stress and money  Increase motivation and job satisfaction Workers with disabilities  Family friendly Phased retirement	Less commuting, More control of time A choice of environment  Mainstream employment opportunities Domestic flexibility Continuity to be provided to through ICTs
Region	Redress imbalance  Assist growth	Removal of restraint of 'where' through ICTs Creation of new type of employment
The environment	A reduction in pollution, wear, traffic congestion	Reduction in numbers of commuters
National economy	More productivity	More productivity in work, Less time lost in commuting, New groups becoming productive Training more up-to-date



## 4. THE CURRENT STATUS OF TELEWORKING IN IRELAND

*“Despite the evidence that teleworking positively enhances the working environment for both employees and employers, Ireland does not yet have a culture of telework-centred organisations.”*

### Introduction

The rapid development of networked technologies such as mobile telephone, the Internet, and the increasing use of intranets and extranets by business organisations facilitates the potential deployment of teleworking. There is improved awareness of teleworking as a ‘mainstream’ work option, occurring against a backdrop of economic growth and increased employment accompanied by worsening skill shortages, rapidly increasing property prices and severe traffic congestion in cities. Many organisations now see teleworking as a direct means of increasing productivity and flexibility.

### Number of Irish teleworkers

In Ireland, the actual number of people teleworking is uncertain. Current statistics are not comprehensive and are the subject of debate. Reasons for this include:

- ◆ Lack of agreement on a definition of teleworking
- ◆ Lack of wide-scale relevant research.

The following statistics are relevant:

- ◆ the 1996 TeleFutures survey<sup>5</sup> indicated 15,000 people regularly teleworking, plus approximately 100,000 occasionally teleworking
- ◆ the 1997 Irish Labour Force Survey shows 35,900 people ‘usually’ working from home and extrapolation from British figures indicates about 16,000 of these are likely to be teleworkers
- ◆ extrapolation from British figures for people who ‘occasionally’ work from home or

outside the office indicates about 27,000 Irish people may also fall into this definition

- ◆ Telecom Eireann reports that of its top 16,000 residential users measured by telephone usage, some 70% are homeworkers, while 50,000 small business customers record very high telephone usage and corporates are paying for nearly 25,000 telephone lines installed in employees homes
- ◆ Telecom Eireann also reports that of its top two residential segments – elite and premium (total 80,000 customers) - 60% do some element of work at home. In the elite segment many appear to be ‘serious’ SOHO<sup>6</sup> workers with 60% of them having a fax machine and 50-60% having PCs and Internet access
- ◆ According to IDA figures there are now approximately 10,000 people working in call centres in Ireland. Telecom Eireann have 70 major call centres listed of which 12 were created in the 6 months up to January ‘99.

Given these figures and if it is assumed that Irish home-working trends are similar to the UK, the likely figures are that, overall, 3.5% or 50,000 of the Irish labour force are teleworkers by broad definition.

### Current practice

Multinational corporations such as Nortel Networks and Hewlett Packard have formal teleworking policies in place and openly publish the benefits they have gained through adopting teleworking. They willingly share their approach, their processes and their experiences with companies considering the changeover.

<sup>5</sup> TeleFutures; Imogen Bertin and Gerard O’Neill (1996)

<sup>6</sup> Small Office/Home Office

Other organisations, including the public sector, are embarking on formal pilots. The results of these pilots will shape the future of working practises in the Ireland of the 21<sup>st</sup> century.

In addition, in an effort to retain valuable staff, resourceful managers often facilitate individual employee requirements by allowing them to adopt a more flexible approach to working – creating an informal non-publicised teleworking solution as it were. Figures for such initiatives are not available.

However, despite the evidence that teleworking positively enhances the working environment for both employees and employers, Ireland does not yet have a culture of telework-centred organisations.

The Nortel Networks teleworking project, **Homebase**, was set up in 1997. It involved 3,200 employees in a global programme. Over 90% of those involved stated that they had increased job satisfaction. There was 10.4% higher overall job satisfaction compared with other Nortel employees. 88% reported increases in productivity and there was a 22% average increase in employee productivity. The results with regard to improved employee satisfaction and increased productivity are such that Nortel aims to have 20% of the company's global staff teleworking by the year 2000. (*Telework Ireland 6th National Conference, Nov. '98*)

## Telecentres and telecottages

There is considerable confusion surrounding the nomenclature and activities of telecentres, telecottages and teleservice centres.

### Telecentres

Telecentres are shared office facilities that provide a range of office-type services, often for individuals, or employees of several companies or different departments/divisions of the same company. They provide a facility for employees to use the office that is most convenient to them, rather than specific office space occupied by their company.

### Telecottages

Telecottages are a special class of telecentre. Telecottages emerged as a creative reaction to rising unemployment particularly within rural communities. Their initial orientation was on new skills development, with a focus on IT related skills. Having established their skills base, some telecottages now have identified the further need to reposition themselves as 'cyber brokers', aggressively seeking clients for the technological and marketing skills of the telecottage workforce. The new focus is shifting from IT skills plus equipment, to customers, market research, marketing, strategic alliances and the development of associated legal, fiscal and trading skills, required as business support services.

Experience now shows that, to allow long-term viability, some telecottages have to become one-stop cyber brokerages offering training, technology, client identification and acquisition, and commercial skills support.

Ireland has a number of community-based telecottages. However, they are not as widely spread as in Britain. This is primarily due to the lack of training support services such as those provided in Britain to telecottages. Some VECs are making innovative use of telecottages to provide IT training. Area Partnerships, FÁS and LEADER Groups are also offering IT training to various categories of people, including those who fall into social exclusion groups (women returning to work, travellers, etc.), sometimes in a telecottage type situation (e.g. Keel and Achill Island IT centres, Get Tallaght Working project).

## Driving Forces

The forces driving teleworking to the forefront in Ireland include:

- ◆ Improved quality of life opportunities for high skill occupations
- ◆ Equality of opportunity and employment potential for marginal groups - people with disabilities, carers, women returning to work and people who live outside urban centres

- ◆ Provision of jobs outside the Dublin area
- ◆ Rising costs of commercial real estate
- ◆ Traffic congestion in the urban areas
- ◆ Access to computers and ICTs in general
- ◆ Current IT and added value information-based skills shortages and the need to reintegrate those with basic skills back into the workforce
- ◆ Global competition and higher customer expectation
- ◆ Teleworking as a contributor to time competition.

It is now clear that the Irish economy needs to increase its skills base in the information technology sector. As knowledge-based work increases in economic importance and extent, the development of appropriate skills among the Irish population becomes more urgent. This reality will drive further impetus towards teleworking as Irish industry looks to retain and recruit skilled marginal groups who also find that flexibility of working hours and place are important for enhancing quality of life.

There has been much improved access to ICTs nation-wide over the past few years coupled with dramatic reductions in telecommunications charges to business customers. This trend is set to continue, with access to the Internet made even cheaper. In tandem, there has been a dramatic improvement in price performance of computing power. The implications of these developments are immense, both for business development and for the creation of new areas and ways of employment, including teleworking. Most importantly they will continue to create viable opportunities that would not otherwise be possible, provided these charges continue to reduce.

The 1998 Telework Ireland survey<sup>7</sup> confirms increased interest in teleworking. It shows that,

of employees who thought that they could do their jobs from home and would like to telecommute, 53% cited 'reduced commuting time' as their motivation. Employers who would like to see more telecommuting among staff cited lower overheads, better staff productivity, better use of office space, attractive work practices for recruitment and balanced staff (between home and work commitments) as the main reasons.

## Barriers

Significant barriers to teleworking exist within the following areas:

- ◆ Attitude and Awareness
- ◆ Technology - requirements and limitations
- ◆ Telecommunications infrastructure
- ◆ Lack of training and/or career prospects
- ◆ Social isolation
- ◆ Operational Uncertainties - planning, fiscal and Health & Safety.

## Attitude

Attitude is a significant barrier to the mainstreaming of teleworking as a widely practised and accepted method of working in Ireland. The 1998-99 ETD Status Report<sup>8</sup> states that skill shortages and problems with management culture, rather than lack of technology or infrastructure or cost of telecommunications, are currently the limiting factors for teleworking in Ireland.

Developing an innovative approach to staff retention is listed as the single most pressing task for human resource (HR) managers today. Many employees highlight excessive commuting and lack of quality family time as key motivators for changing jobs, while companies experience high staff turnover as a consequence. The introduction of teleworking policies in companies could alleviate this problem.

<sup>7</sup> Employer Survey 1998 commissioned by Telework Ireland and supported by Telecom Eireann and the Dublin Transportation Office

<sup>8</sup> European Telework Development 1998-'99 Status Report Ireland

Both management and public attitudes need modification to foster the culture of employee empowerment and personal accountability, together with flexible and dispersed working practices necessary for teleworking.

### **Awareness**

Most people, working or unemployed, are unaware of the real implications and benefits of teleworking. In addition, many who are seeking work think that people will employ them just because they are a 'teleworker', i.e. have a PC at home. They do not realise that teleworking is just another way of working and that tradeable skills coupled with a marketing function are also required.

Organisations are unaware of the competitive benefits of teleworking, of ways to initiate introductory phases and of long-term implications. There is little development of organisational models that foster the implementation and support of teleworking. Bureaucracy is blind to the adaptations that need to be made to successfully implement this new method of working.

### **Technology**

Another barrier concerns technological requirements, limitations and cost. A recent review<sup>9</sup> of 92 small businesses throughout Europe (including Ireland) showed an overall picture among home- or remote office-based teleworkers of significant operational difficulties in the use of ICTs. The following quotation illustrates the point:

*'In fact, so extensive is the picture that emerges of systems failure, isolated learning and cost that one can only surmise that the benefits that accrue when the system is operational must be very significant.'*

The mixture of computer systems used by the majority (75%) of owners/managers was also perceived as a significant barrier to progress. Studies of the effects of such mixed system operations in a SME context are largely absent, but it would appear that the use of mixed systems leads to high operational costs and

expenditure on external help. The firms reviewed were without their systems for 30 working days per year on average, varying from 1 day (Sweden) to 78 days (France). In addition to this, tele-businesses operating in rural areas identified the lack of local technical support and computer maintenance services as a significant barrier to teleworking.

### **Telecommunications infrastructure**

Over the entire field of telecommunications, trends include rapid lowering of costs, coupled with higher capacity (wideband) networks and expansion in the use of the Internet.

The pace of development of new services and networks will be rapid, particularly in the wireless/mobile sector. As an example, by early 2001, current GSM mobile phones will have largely disappeared as high-speed services capable of voice, video, e-mail and internet access will be available on hand-held units. Businesses will have no choice but to adopt this technology to retain competitiveness.

Fixed networks will also see the rapid adoption of wideband services incorporating 'always on' Internet access throughout the country. This will revolutionise business practice and telecommunications tariffs in a very short period of time.

One of the most important aspects of creating an environment that is E-commerce and telework friendly is the provision of universal low cost telecommunications access. Today, long-distance teleworking has considerable disadvantages, as the rates for telecommunications are dependent on the length of the distance. This reduces the possibilities to locate communications-intensive economic activities to remote areas. The development towards equal telecommunications rates, independent of distance, should be supported. At the very least, there should be no extra costs that are not justified by additional costs on the side of the provider.

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<sup>9</sup> *SMEs and New Ways of Working: Accelerating the Shift*: Deirdre Hunt -

Awareness of the potential of these new technologies must be matched with understanding that there is no direct linear relationship between investment in telecommunications and development. Rather, telecommunications investment should be based on economic development strategies, which include the development of new jobs and skills, support for associated new business models, and plans for action in those areas. Basic rate ISDN is considered a minimum for an individual teleworker and Primary Rate ISDN (2 mbit/s) for clusters of teleworkers. Collaboration between development agencies, regional and local actors, telecom operators and private enterprises that can provide teleworking tasks and assignments is a key success factor<sup>10</sup>.

EU structural funds should be made available to help finance the upgrading of telecommunications links in rural areas and telecommunications providers should consider putting wideband in place throughout the whole telecommunications network. The telecommunications market should be carefully monitored with a view to facilitating the move from a high cost to a low cost telecommunications environment, while maintaining high quality and continuous development.

The trend is moving towards companies having manned live reception desks on their websites. Teleworking clusters can interact more immediately with each other and their customers when they can see each other's presence at their on-line desks. This is only possible with a steady connection to the Internet throughout the working day. Irish teleworkers are at a severe disadvantage in this regard; they cannot stay on-line all the time because of the practice of charging by the minute or five minutes for local calls. US local calls have been free for years. (*Feedback from teleworkers to Telework Ireland*)

## Training

Lack of appropriate training is also a major barrier to the take-up of ICTs for teleworking. In a recent review<sup>11</sup>, learning opportunities and training took priority as the most urgent factor needed to accelerate the uptake of ICTs in the SME sector. Lack of understanding was cited as the main obstacle to adopting new ways of working, while access to information was considered the factor that would most encourage the take-up of ICTs, and also best support new ways of working. (Training will be discussed in more detail in Chapter 7.)

Coupled with this is the lack of promotional opportunities experienced by many teleworkers, resulting in the phrase 'maintain a job, lose a career'. One of the negative impacts of the restructuring of employment, of which teleworking is a part, is its effect of excluding sections of the population from the collective social organisations of the workplace. Flexible workers are often invisible in official statistics and are often not members of representative organisations which can be consulted formally.

## Social Isolation

Teleworking opens up new working opportunities for disadvantaged people and disadvantaged regions by allowing people to earn and live at or near their home. However, for people who are already socially isolated, there is a danger that teleworking, especially home teleworking, could provide a solution to one problem (fiscal) but exacerbate another (social).

The objective of the **Code of Practice**, which was developed as an integral part of the Council's work and accompanies this report, is to ensure that teleworkers are recognised as legitimate workers, with rights and protections to safeguard their terms & conditions of employment.

Other important barriers that will be considered elsewhere in this report include operational uncertainties, particularly in relation to the Planning, Fiscal, Health and Safety Environment

<sup>10</sup> *Telework - Good practice for the Future*, NUTEK Stockholm 1997

<sup>11</sup> *op. cit.*

**In Germany**, contractual status is a very sensitive aspect of the debate about telework. There is a great fear that telework will be used for introducing “bogus” self employment. However, due to the great influence of works councils, experience shows permanent workers usually keep their status and that SMEs also do not change the contractual status. . *‘However, for self employed people it might be necessary to keep an eye on the “real” status of the teleworker as some may not be “truly” self employed and are faced with consequent disadvantages like lower wages or job insecurity.’* (Partnership for a New Organization of Work: Telework COM(97)128)

### **Planning Permission and Local Authority Rates**

As a general rule, planning permission is required for any development within the

meaning of the Local Government (Planning and Development Act), 1963. However, until the provisions of the Planning Laws are tested by the Courts, it is impossible to state with certainty what the planning situation is regarding a substantial home office which is being used by the occupier of the house to make their living. The situation is even less certain if the services of a secretary or assistant in that office is employed.

Another aspect of concern to teleworkers is the question of Local Authority rates. Rates on domestic premises were abolished in 1978. However, in the Act that abolished domestic rates, there is a definition of a ‘mixed hereditament’ as a premises being used partly as a dwelling and partly for another purpose. It is possible (although not clarified) that a house that includes an office being used by a teleworker is a “mixed hereditament” within this definition. As such, it could be liable to have rates levied on it.<sup>12</sup>

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<sup>12</sup> Brian Carroll, BL: Report for Telework Ireland: Consideration of legal issues.

## PART 2 Strategy for Action

### 5. AWARENESS

*“Awareness can only be effectively addressed by a successful co-operation between the various parties involved, such as the social partners, national and regional authorities, employers, unions and the media.”*

#### Introduction

One of the key elements slowing down the adoption of teleworking as a mainstream method of working is lack of awareness.

- ◆ Particularly among management at all levels, in both private and public sectors, there is unawareness of new flexible ways of working that benefit both employers and employees
- ◆ There is also a lack of awareness of the barriers associated with teleworking, such as social isolation and limited career prospects.

Awareness can only be effectively addressed by a successful co-operation between the various parties involved, such as the social partners, national and regional authorities, employers, unions and the media.

The establishment of a ‘brand’ for teleworking would help create awareness and promote teleworking. A ‘Teleworking Ireland’ brand image/logo could be created and endorsed by government and test criteria established so that an employer or worker would have to meet an approved standard in order to avail of special incentives and/or grants (described further in Chapter 8).

#### Government

An extensive awareness programme, undertaken or resourced by Government, is required to bring a realisation of the possibilities and benefits of teleworking to businesses, public sector and employees. In

addition, it is vital that Government shows itself to be a leader in the implementation of new working methods.

Currently, an examination of the potential for the introduction of homeworking, including teleworking, in the civil service is under way, together with the feasibility of commencing pilot projects in a number of Departments. This work is to be encouraged and developed.

#### Statistics

A recent Report on Teleworking advocates the collation of new statistical information:

*‘All economic policy measures, at EU, national or regional levels, must recognise the existence of networked tele-enterprises as a significant focus. This means that new statistical definitions must be determined to more accurately determine the parameters of the service sector.’<sup>13</sup>*

On the basis of the following definition adopted by the Council: ‘...’, data on the extent of teleworking in the Irish population should be collated by the Central Statistics Office through the National Quarterly Household Survey.

#### Local Authorities and development agencies

It is important that a comprehensive information campaign be initiated to inform and demonstrate to Local and Regional Authorities and industrial development agencies how to apply teleworking for various purposes. Coupled with this, an extensive

<sup>13</sup> European Telework Development 1998-99 Status Report Ireland.

targeted information campaign about teleworking as a job creation facilitator should be launched.

Access to new technologies should be provided in education and training establishments in disadvantaged/deprived urban and rural areas. Resources for such provision should be sought by those involved in the fields of policy and decision-making.

In particular, local authorities must become aware of possible obstacles to telework and be prepared to solve the problems. The rewards are considerable, as elaborated by the following:

*'Relocated small town teleworking applications show higher productivity and work ethics, greater harmony and a higher educational level than comparable entities in large cities or at the main office.'*<sup>14</sup>

Part of the awareness-raising strategy could be the development of a web-site and chat-line to facilitate the matching of the needs of companies based outside Ireland with Irish based skills and service providers.

### **Employers and employees**

The lack of awareness among employers was highlighted in the recent survey on telecommuting<sup>15</sup>. The **employers'** estimate was that 6% of employees are potential telecommuters. This contrasts sharply with **employees'** estimates that 22% of their jobs are suited to telecommuting. Moreover, 72% of employers surveyed in the study stated that they would not like some or more of their staff to work from home.

However, teleworking and telecommuting concepts are beginning to attract the interest of

an increasing number of employers - 67% of the same respondents stated that they would like to have access to information and/or advice on the possibility of staff working from home. The number of enquiries received by Telework Ireland and hits on its web-site are also growing by up to 50% per annum. Yet there remains a significant lack of awareness of teleworking at employer/management level. This lack of awareness and information among employers must be addressed.

Many employees who are teleworking are unaware of their rights and the statutory protections that exist for them. The location of employment does not interfere with a person's employment status, rights or obligations.

**Shannon Development** has placed considerable emphasis on raising ICT awareness among enterprise in the Region through their involvement in EU supported project such as ENCATA, ShIPP, MIDASNet and TITAN. It is also pursuing specific initiatives related to teleworking, including developing teleservices projects in the Region. *'In our view, teleworking covers a range of different activities that use ICT intensively as well as the more traditional definition of individuals working from home... Teleworking can help the Region to achieve a better spatial distribution of economic activity by creating opportunities for communities in rural areas to attract and develop new enterprises based on ICT. Examples are specialised call centres and telecottages.'* (David Hogan, Manager - Information Society Projects)

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<sup>14</sup> *Telework - Good practice for the Future*, NUTEK Stockholm 1997

<sup>15</sup> Employer Survey 1998 commissioned by Telework Ireland and supported by Telecom Eireann and the Dublin Transportation Office.

## Action Points

The Council makes the following recommendations:

### 1. The initiation of a Government Awareness Campaign

- ◆ That Government commits itself to initiating a national media campaign promoting teleworking and especially encouraging companies and individuals to work and relocate in rural Ireland using teleworking
- ◆ That an adequate budget be assigned and the following support structures put in place:
  - Practical assistance and dissemination of information on the development and support of teleworking to industry and to employees
  - Development of support mechanisms at local, regional and national levels, and on the Internet
  - Support directed to engage key managers to ensure their familiarity with the concepts involved particularly with regard to managing at a distance
  - Promotion of the Code of Practice for Teleworking.

### 2. The formation of a Government Teleworking Policy

- ◆ That a Government Teleworking Policy be established requiring all Departments to introduce teleworking option into their mainstream working and provide a Status Report on progress in their Annual General Reports
- ◆ That all publicly funded organisations be required by the relevant Minister to formulate a Teleworking Policy option to be implemented by 2002. This Policy will include benchmarking criteria to align ourselves with other countries in the EU and elsewhere and will enable a minimum of 10% of all employees to become involved in teleworking.

### 3. Endorsement and adoption of the Code of Practice for Teleworking

- ◆ That the relevant Minister takes the necessary steps to have the Code of Practice for Teleworking endorsed and adopted by the Social Partners.



## 6. DEVELOPING EMPLOYMENT OPPORTUNITIES

*“If our young people, now being educated, grasp the concepts required for the networks of the future, Ireland can indeed become a leader, not by following trends but by setting them.”*

### Introduction

A new generation is growing up in Ireland that will be accustomed to information and communication technologies (ICTs) from early childhood and they will use it in ways that are very different from today's use. They will be accustomed to operating in 'cyberspace'; virtual communities, virtual organisations and E-commerce will be part of their lives.

In this new environment, the new ways of working described will establish themselves quickly. New employment opportunities will be location independent, with greater flexibility and better quality. If our young people, now being educated, grasp the concepts required for the networks of the future, Ireland can indeed become a leader, not by following trends but by setting them.

The opportunity now exists to ensure that all our people can live where they want to live, in rural or urban settings, and still have the potential to achieve the highest quality of life. In this era of location independent employment, the necessity to travel to work will be greatly reduced, and teleworking will be a normal way of working. The challenge today is to create the environment in which this new future will be manifested to the advantage of everyone.

Teleworking offers disadvantaged groups who aspire to becoming self-employed (such as people with disabilities or carers), the opportunity to set up business in an environment that suits them. The numbers of people in these categories who are at present obtaining IT skills confirms the attractiveness of this concept.

### Demand for new skills

The following specific skills are identified as currently being in demand here, with projections for increased demand, some or all of which may lend themselves to teleworking<sup>16</sup>:

#### *Information Technology/IT Related Skills:*

- IT Engineering professionals
- Computer Science professionals
- Programmers
- Software localisation engineers
- Legacy system engineers

#### *Others:*

- Project managers
- Telesales/service professionals, particularly where linguistic requirements are involved
- Back office staff, particularly where linguistic requirements are involved
- Virtual brokers
- Web Designers

New IT skills are emerging regularly. In addition, many conventional non-IT skills (e.g. project management) will be able to be exercised by teleworking.

The current skills shortage offers significant opportunity to teleworkers – employees and self-employed - operating from and within the platforms listed above. With appropriate management and support, Ireland can provide a pool of accessible skills to both internal and global markets. Immigration of highly skilled workers attracted by a teleworking friendly Ireland also could have economic and skills effects on the areas into which they move.

It is important to bear in mind that specific skills are in high demand globally and short supply is not just a problem confined to Ireland there are significant shortages of skilled IT

<sup>16</sup> Information on the specific skills shortages has been obtained from FÁS, ESRI, Enterprise Ireland, Expert Group on Future Skills Needs, Business interests

people all over Europe. Recent reports suggest that by 2002 the potential shortage could reach 600,000 personnel. Immigration of highly skilled workers attracted by telework friendly countries could have economic and skills effects on the area into which they move.

Key shortages will affect skills related to the design and management of computer networks. Because trainers and programmers take time to mature (it takes several years before the kind of skilled people required by industry are produced), the economic competitiveness of Ireland and indeed, of Europe as a whole, could be threatened.

My name is Thomas Cruz. I moved here to Ireland last October from the Island of Guam in the South Pacific. I am a network and remote access system administrator. I am also teleworking with a company based in Guam providing remote network administration, website management and maintenance. Coming here to Ireland I brought a wealth of knowledge and experience in the teleworking environment. I have only recently received my work permit with effect from last November (1998). Our proposal is to focus on developing the company's ideas and market teleworking in Ireland. (*Thomas Cruz, Director, Virtual Staff Services*)

## Marketing of international tradeable services

The experience of telecentres and people wishing to operate as teleworkers is that, for success, supporting marketing activities are essential to match available skills with actual demand. Having teleworking skills and being

available for work is not enough; work will not appear without marketing.

The kind of marketing involved needs new kinds of skills, called 'Virtual Brokerage'. Global as well as local demand must be discovered by research; international demand must be sourced on the Web. Prospective clients must then be guided to people/enterprises with the required skills. All telecentres should engage in this kind of activity and network with other telecentres and services internationally.

There is great potential for the creation of new business models and new employment. New multifaceted telecentres can be set up in designated areas or existing centres up-graded to provide advanced teleservices, to broker them internationally and to research new business models.

They also should be linked with existing development agencies and their functions can include the set-up and maintenance of a *Virtual Employment Portal* - a 'shop-window' on the Web that will attract global demands to available Irish services. Essentially, this is a national database service that can link people and skills. Used in conjunction with enterprise promotion (e.g. by IDA, Enterprise Ireland and County Enterprise Boards), it would be a powerful promotional tool that could reduce the costs of sourcing skills, facilitate relocation and offer packages.

Other functions of such telecentres can be:

- ◆ to promote the use of telecentre services by national and international companies and
- ◆ to facilitate the use of teleworking by large organisations as an accepted method of working.

## Action Points

The Council makes the following recommendations:

### 1. The establishment of new business models

- ◆ That up to five pilot teleworking initiatives be selected as a result of competition to demonstrate the development of:
  - marketing strategies to support existing development agencies
  - best practice in the international marketing of tradeable skills and services and
  - vertical and horizontal integration of teleworking in business development.
- ◆ That a central resource and database of available Irish teleworking skills and services be developed for the Web and be properly staffed, maintained and promoted
- ◆ That an international promotional campaign be launched with adequate resources to promote Ireland as a source of tradeable skills
- ◆ That, where necessary, skills be sourced from elsewhere in the EU but marketed under an Irish 'brand-name', thus bringing a value-added element to the Irish economy.



## 7. TRAINING, EDUCATION AND SUPPORT

*“The development of tele-education and tele-learning must be speeded up and new teaching methods have to be introduced.”*

### Introduction

In general, the development of the Information Age will have an enormous impact on education and training at every level. People who lack the basic skills to use information technology will be easily excluded from the social mainstream. It is important to develop a range of awareness and IT education programmes, with a particular focus on disadvantaged groups in our society.

At a more advanced level, it is necessary to equip a substantial proportion of the workforce with the skills required for teleworking, including managers as well as employees. In addition, telework makes it possible for workers based in Ireland to offer their services to contractors/employers based abroad. To do this, such workers will need to acquire local knowledge and skills not readily available in Ireland. One of the ways of acquiring such knowledge would be the development of tele-learning schemes, including remote language-teaching programmes.

*‘Comprehensive training in new work methods is very supportive to the development of teleworking. When training includes technologies used in telework applications, it opens up new views to the trainees - whether they be employees, unemployed or small businesses. In addition, telework training provides the trainee with arguments as to why jobs should be moved instead of people and encourages him or her to apply such work arrangements... The development of tele-education and tele-learning must be speeded up and new teaching methods have to be introduced...’<sup>17</sup>*

### New training programmes

New National Training Programmes, in addition to the existing Post Leaving

Certificate and FÁS courses, should be put in place to provide an adequate pool of skilled labour so that businesses demanding internationally-scarce skills can source them in Ireland. Public/private partnerships can be developed to deliver such training. Demand may be from indigenous companies, non-Irish companies who have already established a presence in Ireland and organisations who seek skills and services without establishing a physical presence in the country.

The training itself could be largely Internet delivered, thus affording opportunities to people in rural as well as urban locations. The Telework Ireland’s ADAPT-funded software localisation pilot training programme (together with other established programmes) might be used as a model for such training.

All training must achieve the technical standards required by the relevant industry as well as satisfactory standards in practice and procedures. The level of certification achieved must be easily recognisable and identifiable by employers unfamiliar with local standards.

### Language Skills

The problems in attracting inward investment due to the lack of linguistic skills within the Irish work force has been acknowledged by the establishment of the Post Leaving Certificate International Teleservices programme.

In 1998, 64,154 students sat the Leaving Certificate. The following table shows the breakdown of the 50,287 students who took a foreign language.

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<sup>17</sup> *Telework - Good practice for the Future*, NUTEK Stockholm 1997

**Table 2 Analysis of language training at Leaving Certificate level**

SUBJECT	HIGHER LEVEL	ORDINARY LEVEL	%
French	17,628	19,453	73.7%
German	7,234	4,138	22.6%
Spanish	989	685	3.3%
Italian	100	60	0.3%

Foreign languages do not feature on the primary school curriculum and there is clearly an imbalance in the availability/uptake of education in foreign languages at secondary level. The above figures show that less than 1,700 students nationally took Spanish, which rates among the world's top three business languages. Clearly there is an imbalance in the numbers of students taking French and German, relative to the volume of trade which we do with these countries respectively.

Northern European languages such as Dutch and Swedish are largely ignored within our education system. Worse, to date, no attempt has been made to address the linguistic requirements necessary to do business with Eastern economies, e.g. Japan, the world's second largest economy.

The rapidly expanding Teleservices industry in Ireland largely depends on returning Irish nationals and other EU nationals living in Ireland to address the need for languages not taught within our education system. The volume of such personnel is limited. One approach to addressing these problems is to use ICTs to bring or enhance language training skills locally, including the development of more on-line or distance-learning language training packages.

ICT training at primary level should be combined with language training and exposure to foreign languages should occur at a very early age, in fact, from the start of formal education. Research shows that early exposure to different languages promotes understanding of grammatical principles and, therefore, enhances writing and logic skills in general.

If Ireland is to become a leader in E-commerce, as our Vision declares, the necessary steps must be taken to produce a workforce that not only has the technical skills, but also the language skills to operate in this multi-cultural and multi-lingual environment.

**Supports for teleworkers**

The required supports must be put in place to facilitate teleworkers at their place of work. *Technical support* is a problem that gets bigger as the enterprise gets smaller. A network could be envisaged that would have:

- ◆ First level technical support for minor problems, supplementing retailers and manufacturers. This could possibly be located on the web by means of chat-line and discussion groups, serviced by enthusiasts on a voluntary basis.
- ◆ Second level support for difficult problems, serviced by existing retailers; and
- ◆ Research facilities, supported by national funding. This centre should have strong liaison with Telecom operators, and network and equipment suppliers.

*Personal support* is also required. A fear is expressed that, without the appropriate supports, teleworkers may experience social isolation, low-grade working conditions, precarious employment and low pay. It is most important to identify the routes to personal support and to let all teleworkers know of these routes, since awareness is the best support of all.

Such routes include:

- ◆ Telework Ireland
- ◆ Employer/employee umbrella organisations
- ◆ Trade unions
- ◆ FÁS
- ◆ Health and Safety Authorities
- ◆ Telecentres that offer advice services
- ◆ Remote education and training programmes.

### Training the trainers

It would be unrealistic to expect in so new an area that all those involved in policy construction and implementation of supporting measures could be familiar with the implications of teleworking as it evolves. It is our belief that an urgent need exists for Development Programmes in Teleworking to allow this perspective to be thoroughly incorporated into strategic planning and operational processes, at all levels, in both the private and public sector in Ireland.

### Implications for managers

In the Information Age there will be significant changes in the manager/employee relationship: from directing to leading; from command and control to trust and personal empowerment. Teleworking speeds up these shifts since the manager and employee are no longer co-located.

To many managers, it is a source of concern that staff members who are not physically present at the office cannot be managed and supported in a traditional way. Basically, managers have to accept less direct command of work status and details; this may be very challenging for many.

*'A manager with social skills, open to organisational innovations and capable of working as a team coach seems to be the ideal leader of a teleworking team. This is a great challenge to managers with more traditional management styles, but if they manage to establish good telework leadership, they have much to gain' (Telework - Good Practice for the Future NUTEK Stockholm 1997)*

## Action Points

The Council makes the following recommendations:

### 1. The implementation of 'telework friendly' training and education initiatives

- ◆ That a comprehensive Education and Training Strategy to facilitate the adoption of teleworking be devised and implemented as a matter of urgency. This strategy should include support for research into effective methods of delivery
- ◆ That 'introduction to teleworking' training be made available, targeting business owners, managers, employees and contractors. This training to be website-based
- ◆ That application based IT programmes be introduced and developed to compound training/retraining learning already in place. These should be integrated into life long learning for the population
- ◆ That, where possible, ICTs be used to deliver education and training courses for marginalised groups for whom teleworking represents a major and fundamental opportunity
- ◆ That the Post Leaving Certificate 'International Teleservices Programme' continues to be resourced and provided by the Department of Education and Science
- ◆ That funding be provided for the proposed pilot project to include Modern Languages (French, German, Spanish and Italian) into Primary Schools
- ◆ That a research programme be developed in conjunction with third level institutions, dealing with advanced teleworking issues such as the establishment of virtual corporations, motivation of virtual teams, transnational issues, etc.

### 2. The formation of a Teleworking Action Forum

- ◆ That a Teleworking Action Forum be established with permanent resources and secretariat to ensure that all initiatives related to teleworking be professionally co-ordinated, implemented and managed.
- ◆ That this Forum includes representatives from business, unions, academia, Government, individual teleworkers, regional authorities and local interests.
- ◆ That this Forum has the following responsibilities:
  - Monitoring and evaluating progress
  - Gathering of relevant statistics and report writing
  - Initiating and supporting relevant research
  - Funding innovative initiatives
  - Monitoring legislation in the context of its impact on teleworking
  - Updating and promoting the Code of Practice for Teleworking, in conjunction with the Social Partners
  - Presenting an Annual Report to the Dáil each year.
- ◆ That, given the infrastructural and economic differences that exist between the different parts of the country, special regional divisions of this Forum be established. These divisions to ensure that the various teleworking initiatives achieve a best-fit within the local environment.

## 8. FISCAL ENVIRONMENT

*“Retail growth on the Internet in Europe is forecasted to grow from \$165 million in 1998 to \$1.3 billion in 2000.”*

### Introduction

As already discussed, E-commerce is the environment in which future commercial transactions and new high-quality employment will take place. Retail growth on the Internet in Europe is forecasted to grow from \$165 million in 1998 to \$1.3 billion in 2000 (an eight-fold increase).<sup>18</sup> Many jobs will be created using the new technologies that facilitate global movement of goods, intellectual property, services and money.

All these transactions will take place in ‘cyberspace’, a dimension without location, where customer, client, author, supplier and distributor can be anywhere in the world. In this situation, teleworking is predicted to have an important role in the establishment of E-commerce in Ireland. The rewards in terms of new high-quality jobs and, in particular, teleworking jobs, will be immense.

### Towards an E-commerce friendly society

Steps to facilitating the development of an E-commerce friendly society include the creation of an imaginative tax environment to:

- ◆ facilitate the growth of E-commerce
- ◆ encourage teleworking and
- ◆ support teleworkers.

Problems such as clear definitions of ‘place of consumption’; taxation of goods and services purchased electronically by people with no VAT numbers; division of tax revenues between different Member States; creation of a virtual VAT register; and the 6th VAT Directive, will be the subject of a paper to be published by mid-1999 for wider public

consultation on the future taxation of E-commerce.

#### VAT (Fourth Schedule)

Fourth Schedule services are taxed where they are deemed to be received. The reverse charge rule applies whereby the recipient of the service is deemed to have supplied the service himself. At present, accountancy consultancy, engineering, legal banking, financial and insurance services, data processing, information services, etc. come within the definition of services that are included within this definition. It is recommended that all teleworking related services and E-commerce digital transaction services be added to the definition.

**Example:** An Irish teleworker (VAT Registered) supplying data processing services to a business (Vat Registered) in another EU member state does not have to charge VAT on transactions. This has huge advantages from an Irish competitive point of view.

The issue of double taxation is a vexatious one for teleworkers who live in Ireland, but whose employer resides in another jurisdiction. It should be the employer’s responsibility to ensure that the correct and single taxes are paid to the proper tax authorities and that the employee is not penalised by lack of understanding of the double-tax rules.

### Taxation

The general area of taxation, insofar as it affects teleworking, needs to be addressed. The European Charter on Telework recommends that existing treatment of teleworkers working at, or from, home and at local shared office

<sup>18</sup> Source: Forrester (March ‘99)

should be examined in the light of national and EU policies to improve understanding and clarity on teleworkers' concerns about tax allowances and deductions, including:

- ◆ Teleworkers' employment status and tax status
- ◆ Tax status of offices in the home affecting rights to claim travel expenses
- ◆ Capital taxes and capital allowances on offices in homes, and income tax deductions on interest on loans to build/create home offices
- ◆ Guidelines for tax deductible expenses incurred at home offices, including heating, lighting, soft furnishings, hard furnishings, cleaning, depreciation, self-catering, extra insurance and other items
- ◆ Benefits-in-kind tax implications of employed teleworkers provided with equipment and communications.

## Incentives

At a national level, financial instruments, including fiscal, seed and venture capital supports, should be readily available for the creation, development and maintenance of

tele-enterprises and networks. Criteria as to viability should be developed reflecting the realities of tele-enterprise creation and trading.

Employers should be encouraged to quantify the interest level of urban located employees in relocation to rural areas with their current employer and to use teleworking as a method of working. Measures to provide financial incentives to employers to de-centralise also need to be investigated and, where appropriate, implemented. Such measures could include grant assistance and/or tax credits, to assist with:

- employee relocation,
- additional buildings and facilities required for teleworking,
- telecommunications and
- Teleworking-related training.

Creation of a fiscal environment that supports people who are teleworking is quite complex. In addition, there are aspects of E-commerce taxation that all governments are clearly struggling with. The approach recommended is to look at taxation tools already in place and adapt where possible. We also need to research our major trading partners' progress in the same area.

## Action Points

The Council makes the following recommendations:

1. **That Ireland becomes ‘telework friendly’ from a fiscal and environmental point of view.**
  - ◆ That financial incentives/tax credits for all organisations, large and small, be provided to establish remote offices in designated areas of low population
  - ◆ That financial incentives/tax credits (‘Green Taxes’) for enterprises and other organisations be provided to encourage employees to work from home or a telecentre where any of the following goals can be achieved:
    - Reduction in the pressure on and pollution of urban and transport infrastructures
    - Increasing employment in socially disadvantaged areas
    - Reduction in the rural/urban job creation imbalance
    - Rural re-population and renewal
  - ◆ That Capital Gains Tax legislation be revised to specifically exclude all teleworking activities from clawback in respect of Residential Property Exemption
  - ◆ That all teleworking related services and E-commerce digital transactions should be added to the list of services incorporated in VAT (Fourth Schedule)
  - ◆ Where an employer set up an individual employee to work from home and agrees to reimburse the individual for office overheads, that the first **£5,000** of such overheads be exempted from benefit in kind. Where the expenditure on office expenses is greater, the onus should be on the employee to keep appropriate records in order to claim the excess
  - ◆ That benefit in kind be excluded from any element of the supply of a computer and other communications hardware by an employer to an employee, where a contract of service is established
  - ◆ That additional financial and other incentives be provided to facilitate the employment of people with disabilities as teleworkers
  - ◆ That the Department of the Environment commences a consultation process with Local Authorities to establish guidelines on the limits of use of a home office and the concept of ‘development’ within the planning code.
  
2. **That the Irish telecommunications environment facilitates the adoption of teleworking as a mainstream method of working.**
  - ◆ That the Director of Telecommunications Regulation considers, in all licensing arrangements, the standardisation of capital costs for provision of services and infrastructure throughout the country
  - ◆ That a flat rate for calling anywhere on the island of Ireland be established as a matter of urgency and that the roll-out of wideband with universal access for the entire country be implemented within three years.

## CONCLUSIONS

Information and communications technologies have come of age and are influencing and reshaping how we work and live. A new paradigm of work is developing. New, better quality employment opportunities are being created, location independent and with greater flexibility.

Teleworking is part of this revolution, defined as '*a way of working using information and communication technologies in which work is carried out independent of location*'. Teleworking is not a job, it is a method of working. In itself, teleworking will not create jobs; rather it is an essential part of introducing and supporting new ways of working, organisation and trade, in particular E-commerce.

As well as creating an environment for new jobs, the potential of teleworking for improving the quality of life of workers is considerable. It offers a better balance between our role as part of the labour force and our other roles as members of society outside work.

The core of opportunity in teleworking is in services and particularly internationally traded services, a rapidly growing sector that will affect all Irish commerce. The current global skills shortage offers significant opportunity to Irish

teleworkers in this sector, among others. With appropriate management and support, Ireland can provide a pool of accessible skills to both internal and global markets.

Teleworkers can live in the locations of their choice and have greater flexibility as to when and where they work. This implies a huge potential for teleworking to contribute to employment creation in rural and other disadvantaged areas. The support of a teleworking is therefore important in the promotion of Regional Development.

Support of teleworking in Ireland requires three main action areas - Awareness; Education/ Training and Support; and the Fiscal Environment. The report makes recommendations in these three areas. Implementation of the recommendations will play a major part in preparing Ireland for a leading position in the E-commerce world.

In addition, telecommuting, if generally implemented, will have a significant effect in improving the environmental quality of our urban areas. These benefits add to the quality of life of commuters as well as to the physical environment.

## GLOSSARY

*(The following glossary has been largely taken with kind permission from the Status Report on European Teleworking, TELEWORK 98.)*

**ADSL (Asymmetrical Digital Subscriber Line).** A way of providing high bandwidth services into the home, such as television, video on demand and Internet access. It uses conventional twisted pair copper cable.

**Broadband.** Generally data transmission speeds in excess of 1 Mbps.

**Call Centres.** An example of remote office working, where work previously dispersed is centralised into one centre, . Calls to local customer service centres are automatically diverted to the centre, which typically covers a large region or continent.

**Electronic Commerce (E-Commerce).** The handling of formal transactions over electronic networks, often directly computer to computer. Many aspects of electronic commerce are now attracting 'E' labels e.g. E-payments, E-trade, E-shopping, E-banking.

**Electronic Markets.** Locations on the Internet, which facilitate connections and trading between buyers and sellers. These may be in the form of virtual shopping malls, trade directories, electronic communities or online auctions.

**Email.** Electronic mail. Sending and receiving messages over computer networks, such as the Internet.

**ETD (European Telework Development).** An initiative under the ACTS programme. The aim of the initiative is stimulate the beneficial uptake of telework, teletrade and telecooperation.

**Extranet.** A network using Internet protocol, that allows external organisations, such as suppliers or customers, access to selected internal information.

**Hot-desking.** This is where a group of people don't have personal desks but share a smaller number of desks, and use whichever one is free.

**ICT (Information and Communications Technology).** A generic term that covers both information technology (computer hardware and software) and telecommunications equipment and services

**Information Society.** The term adopted by the European Commission to indicate a society where information is a key component of economic and social activity. Citizens, either consumers or workers, use information intensively. It is universally accessible through advanced information and communications technologies.

**Internet.** A network of computer networks, estimated to be around 10 million world-wide.

**Intranet.** An internal Internet. In other words an internal computer network that runs the Internet Protocol (TCP/IP).

**ISDN (Integrated Services Digital Network).** Services that allow sharing of multiple devices on a single line, e.g. telephone, fax and computer access to online services. Basic rate ISDN service (ISDN-2) consists of two 64kbps digital communications channels, while primary consists of 32.

**ISP (Internet Service Provider).** A supplier of Internet services including access

**Online Services.** Services that dial-up users access for electronic mail and a range of information services. General services such as CompuServe and AOL also offer email, computer conference and WWW access.

**Social Partners.** Organised representatives of labour market interests such as employers associations and trades unions.

**SME.** Small to Medium sized Enterprises.

**Telecommuter.** A worker with an arrangement to avoid commuting by working at home, or closer to home, all or part of the time.

**Teleworker.** A teleworker is someone who uses teleworking as a method of working.

**Teleworking.** Teleworking is a way of working using information and communication technologies in which work is carried out independent of location. Teleworking is not a job but a method of working.

**Teleconferencing.** A generic term that includes both video- and audio- conferencing .

**Teletrade.** Teletrade literally means “doing business over networks”. It uses advanced information and communications technologies (such as the Internet) to market and sell goods and services, enhance customer relationships and reach distant markets without the overhead of a local ‘physical presence’.

**TWI.** “Telework Ireland”, the Professional Association of Teleworkers in Ireland

**Virtual Organisation.** An organisation of various independent members that operates cooperatively (and may have been created) without the constraints of space and/or time.

**Virtual Communities.** Communities that have been developed around an area of common interest, and use online techniques to sustain themselves.

**Virtual Teams, Virtual Teaming.** The concepts of virtual working applied to a work team. Members of the team work at different locations and use telecooperation methods to progress their joint work.

**WWW (World Wide Web) (Web).** The collection of HTML pages that reside on Web servers across the world. It is estimated that there are over 100 million publicly accessible WWW pages on the Internet, a number that has been more than doubling every year.

## APPENDIX 1 - Some Telework Support Services

<b>Communications Workers Union (CWU)</b>	<p>The Communications Workers Union represents teleworkers, both self employed and PAYE. The union offers a range of benefits and advice services tailored to teleworkers and is currently committing substantial resources to the development of new members. The union has members in a number of call centres, including Eircell, Telecom, SDS and UPS and is campaigning for wider awareness of employment rights within call centres.</p>
<b>Enterprise Ireland</b>	<p>Enterprise Ireland's mission is to help Irish companies grow their sales, exports and employment. It helps Irish companies build competitive advantage through innovation, marketing, company development, training and technology. Offices world-wide link international buyers with this competitive supply capability. Teleservices are supported by Enterprise Ireland under its Internationally Traded services programme. Examples of teleservice projects which have been supported under this programme include call centres, technical support, translating services, literature design, production of technical and quality manuals, software development and data capture tasks.</p>
<b>IBEC</b>	<p>IBEC have published a report 'Guidelines for Teleworking'.</p>
<b>IDA Ireland</b>	<p>The Industrial Development Agency is the agency involved in encouraging inward investment to Ireland. It has been active in developing call centres in Ireland, which now employ approximately 6,000 people. This has been achieved through partnership with Telecom Eireann to provide a specialist unit supporting call centres and through active promotion of Ireland as a location for EU trade with US and Asian companies. The IDA has predicted that the numbers employed in this sector will rise to 10,000 by the year 2000. Around 35% of those employed in Irish call centres are from mainland Europe. The vast majority of these jobs are concentrated in urban areas, mainly Dublin.</p>
<b>Manufacturing Science Finance (MSF)</b>	<p>This Union provides support to workers in the financial and other sectors. It has published a "Guidelines for Teleworking" Report.</p>
<b>Shannon Development (The industrial development agency for the Shannon region)</b>	<p>Shannon Development are pursuing several initiatives related to teleworking centred on developing teleservices projects in the Shannon Free Zone and the National Technological Park in Limerick and other towns in the region. In order to realise the potential of teleworking they are implementing an Information Society strategy with three key components: Infrastructure Development (access to high speed broadband), Awareness Raising and Marketing.</p>

<p><b>Telecom Eireann</b></p>	<p>Telecom Eireann, supports Teleworking as follows:</p> <ul style="list-style-type: none"> <li>- Teleworking manuals - one for employees and one for employers</li> <li>- Provision of Teleworking Helpdesk for all technical/other queries on Teleworking</li> <li>- Teleworking solutions now offered through all sales channels e.g. Business Today catalogue, Working Breakfasts for Corporate customers incorporating case studies and live demos and customer workshops.</li> </ul> <p>Telecom is also preparing:</p> <ul style="list-style-type: none"> <li>- Teleworking solutions: one for Home Office, Flexible Office and mobile office.</li> <li>- A National media and awareness campaign for May 1999</li> <li>- A ISDN Teleworking package to be launched May 1999</li> </ul>
<p><b>Telework Ireland</b></p>	<p>Established in 1993 on a transborder basis, Telework Ireland is the Professional Association of Teleworkers in Ireland. Membership of the organisation includes:</p> <ul style="list-style-type: none"> <li>- Freelance teleworkers</li> <li>- Telecommuters</li> <li>- Individuals and organisations who have an interest in teleworking</li> <li>- Corporates who have implemented or who have an interest in implementing a teleworking policy</li> </ul> <p>Telework Ireland provides an information and advisory service to existing and aspiring teleworkers and telecommuters, as well as professional consultancy services to employers. A panel of Mentors is available to assist and advise individuals and groups who are developing telework based projects. An Executive/Development Officer was appointed to the organisation in 1997 with the support of the EU Special Programme for Peace and Reconciliation. In addition, as part of the EU Adapt Programme, TWI is currently developing an Internet-based training programme in Teleworking and Software Localisation, in conjunction with national partners FÁS and East Clare Telecottage and other transnational partners. The course is being delivered to 100 students throughout the island of Ireland and within the EU on a pilot basis during 1998 and 1999.</p>
<p><b>Udarás na Gaeltachta</b></p>	<p>Udarás na Gaeltachta is the development agency with responsibility for the economic and social development of the Gaeltacht Regions of Ireland. Udarás na Gaeltachta supports the development of Industry within the Gaeltacht Regions and these include Teleservices, IT projects etc. A wide range of teleservice projects has been supported by an t-Udarás to date.</p>
<p><b>W.I.S.E. Forum</b></p>	<p>The WISE Forum (Work, Information Society and Employment) exists to link those interested in teleworking and associated new ways of working. It provides statistical and qualitative information for both individual and corporate clients on telework associated trends.</p>

## APPENDIX 2 Submissions

The Council is indebted to the following bodies and individuals who made submissions and presentations:

- ◆ Brian Carroll BL
- ◆ Kilkenny Information Age
- ◆ Bealtaine Ltd Derg House, Connaught Road, Scariff, Co Clare
- ◆ Ms Mary Leahy, No 7 Lispuchaun, Kilmaley, Ennis, Co Clare
- ◆ Dr Paul Phelan (Dublin)
- ◆ Hugh O'Connor, Swim-Two-Birds, Boorolong, New South Wales 2350, Australia
- ◆ Joint submission from:  
European Telework Development Project (Ireland)  
Communication Workers' Union  
Telecom Éireann  
Work Research Centre  
Central Remedial Clinic
- ◆ David Kelly, Kelly Software Ltd
- ◆ Patrick Dwyer, Knockbreenagh, Drumnacool, via Boyle
- ◆ IBEC
- ◆ Cormorant Telematic Systems
- ◆ ISME
- ◆ Western Development Commission
- ◆ Department of Justice, Equality and Law Reform
- ◆ IDA Ireland
- ◆ Shannon Development
- ◆ Jack Botsford, CEO of Operation ONLINE, Newfoundland
- ◆ Don Whitty, Distributed Learning Centre and Mirimachi College, New Brunswick
- ◆ Richard Fuchs, President of Futureworks Inc, Newfoundland
- ◆ SFA (Small Firms Association)
- ◆ RTÉ
- ◆ Plato, Cork
- ◆ Údarás na Gaeltachta
- ◆ Department of the Environment
- ◆ Environmental Protection Agency
- ◆ National University of Ireland, Galway
- ◆ Dublin Institute of Technology
- ◆ Royal College of Surgeons
- ◆ National University of Ireland, Maynooth
- ◆ Midland Regional Authority
- ◆ South West Regional Authority
- ◆ The West Regional Authority
- ◆ Sligo County Enterprise Board Limited
- ◆ Clare County Enterprise Board Limited
- ◆ Wexford County Enterprise Board
- ◆ Tipperary South Riding County Enterprise Board Limited
- ◆ Westmeath County Enterprise Board
- ◆ Louth County Enterprise Board
- ◆ South Dublin County Enterprise Board
- ◆ Monaghan County Enterprise Board
- ◆ Dunlaoghaire Rathdown County Enterprise Board
- ◆ Donegal County Enterprise Board
- ◆ Cavan County Enterprise Board
- ◆ The Laois County Enterprise Board Ltd.
- ◆ Tipperary North County Enterprise Board
- ◆ The Leitrim County Enterprise Board Ltd
- ◆ Blanchardstown Area Partnership
- ◆ Drogheda Partnership
- ◆ South Kerry Development Partnership
- ◆ West Limerick Resources Ltd.
- ◆ County Leitrim Partnership
- ◆ County Monaghan Partnership
- ◆ Longford Community Resources Limited
- ◆ Southside Partnership
- ◆ Ballyfermot Partnership
- ◆ Barrow Nore Suir Rural Development
- ◆ Western Rural Development Co. Ltd.
- ◆ Blackwater Resource Development
- ◆ Donegal Local Development Company
- ◆ Arigna LEADER
- ◆ Mid-South Roscommon Rural Development Company Ltd.
- ◆ West Cork Leader Co-Operative Society Limited

## Membership of the Council

Prof. Tom Callanan <i>Chairman</i>	University of Limerick
Mr Liam Breslin	Strategic Developments, Telecom Eireann
Ms Maureen Breslin	Irish Wheelchair Association (resigned Dec 1998)
Ms Paula Carey	Research Officer, ICTU
Ms Riona Carroll	Executive Officer, Telework Ireland
Ms Claire Foley	Manager, International Teleservices Course Cavan College of Further Studies
Mr Niall Hayes	Lucent Technologies
Professor Deirdre Hunt	University College., Cork
Mr. Terry Landers	Ericsson Systems Expertise
Ms Mary Leahy	College of Commerce, Cork (resigned May 1998)
Ms Helen Mullins	College of Commerce, Cork
Mr John Lowery	Deputy Chief Executive, Údarás na Gaeltachta
Mr Charles Lynch	Chief Executive Officer, Galway County & City Enterprise Board
Ms Sheila McCaffrey	Managing Director, KITE
Mr Joseph McCormack	Managing Director, McCormack and Associates
Mr Gerry McGovern	Managing Director, Nua Ltd
Mr Declan Murphy	Enterprise Ireland (resigned September 1998)
Mr Tom Maguire	Enterprise Ireland
Ms Una Murphy	TELSI
Ms Maebh O'Connor	Business Development Manager, PKS systems
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