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ETNO Contact details:

Avenue Louise 54 | B-1050 Brussels | Belgium

Tel. 32 2 219 32 42 | Fax 32 2 219 64 12 | www.etno.be

ACCOUNTABILITY IN CONNECTIVITY

NOVEMBER **2005**

EUROPEAN TELECOMMUNICATIONS NETWORK OPERATORS' ASSOCIATION

Accountability in Connectivity

2005 ETNO Environmental Report

Contents

Foreword

Michel CATINAT,
Head of Unit Competitiveness Aspects
of Sustainable Development
European Commission
DG Enterprise and Industry

Sustainable competitiveness is key to delivering the Lisbon Agenda, which can only succeed in the long term if linked to a sound development strategy. This strategy must take into account environmental issues such as climate change and management of natural resources.

Technology and innovation drive economic and social growth. However, for technological development to realise its full potential and to guarantee that globalisation offers opportunities for all, it should provide for inclusion and environmental protection.

The telecommunications industry occupies a unique position, since it can deliver solutions which, if properly tailored and used, can significantly contribute toward reaching this aim. Broadband communications is one of the main drivers to achieve economic growth and social inclusion, with minimal impact on the environment. Decoupling economic growth from excessive consumption of natural resources can be achieved through better use of ICT services. But to lead the way, telecom companies must be the first to exploit the benefits of their own technologies. In a sustainable society all players understand the importance of working together to create value for all stakeholders. Every player must understand where its responsibility lies and act accordingly. The telecommunications industry has already demonstrated leadership through a long record of achievements.

Since its creation, the ETNO Environmental Charter has been an industry-wide catalyst for improvement. Working together, twenty-five responsible companies have achieved remarkable results and this report, the fourth of its kind, is proof of that success. The charter shows the importance of transparency and accountability, since credibility stems not just from words or signatures, but from action.

The launch of ETNO's new Sustainability Charter and its joining of the Global Compact underscore the Association's pledge to preserve the environment for future generations. I welcome this initiative whose reporting exemplifies strong commitment and progress. I look forward to an expanding commitment to sustainability, and I count on the telecommunications industry to contribute to fulfilling the expectations that Europe demands of it.

Mr. Michel Catinat [1]

1/ The views expressed in this article are those of the author and do not necessarily reflect the official European Commission's view on the subject

Introduction

Alfredo ACEBAL,
ETNO Executive Board Chairman

Danilo RIVA,
ETNO WG Sustainability Chairman

It began eight years ago, when Europe's telecommunications operators realised they could play a leading role in society by moving together towards sustainability, and sending a strong message with one voice. This is how the ETNO Environmental Charter came to life.

Since then all industry sectors, including telecommunications, have gone through a period of economic turbulence. This, along with market liberalisation and increased competition, has forced companies to make difficult decisions, shifting their investment to avoid market constraints and take advantage of market opportunities.

But against all odds our industry never lost sight of its commitments; on the contrary, its environmental footprint has continued to shrink over time. In addition, our industry has developed a much deeper awareness of its potential for making sustainability happen.

On the occasion of the World Telecommunication Day 2005, on 17 May, the ITU's Secretary General highlighted the role of ICT as a real driver for social and economic development and thus for a prosperous and equitable world.

ETNO member companies are aware that such a role lies at the very heart of their core business: but they also understand they can only make a real difference if they conduct their business in a sustainable manner.

In recent years there has been an increasing demand from our companies' stakeholders for good policies and actions encompassing transparency, support for social growth and management of risks. What they demand is that companies concentrate on developing good business value by incorporating more and more ethical values into their activities.

Environmental Charter's signatories believe in the value of working together, sharing best practices and aiming for continuous improvement. They have shown that Europe's telecommunications industry is a sector exemplary in its responsible management of resources, protection of the environment and sound social and economic growth. Thus, nearly a decade later ETNO has decided to further develop its commitment. By shifting from an Environmental to a Sustainability Charter, ETNO has once again seized the initiative, by broadening its charter commitment to overall business management.

Without sustainability there is no future. The way we do business is key to building solid business relationships with our stakeholders and making a real contribution to society. Responsible companies have the best chances of success as they are trusted by investors, customers and employees.

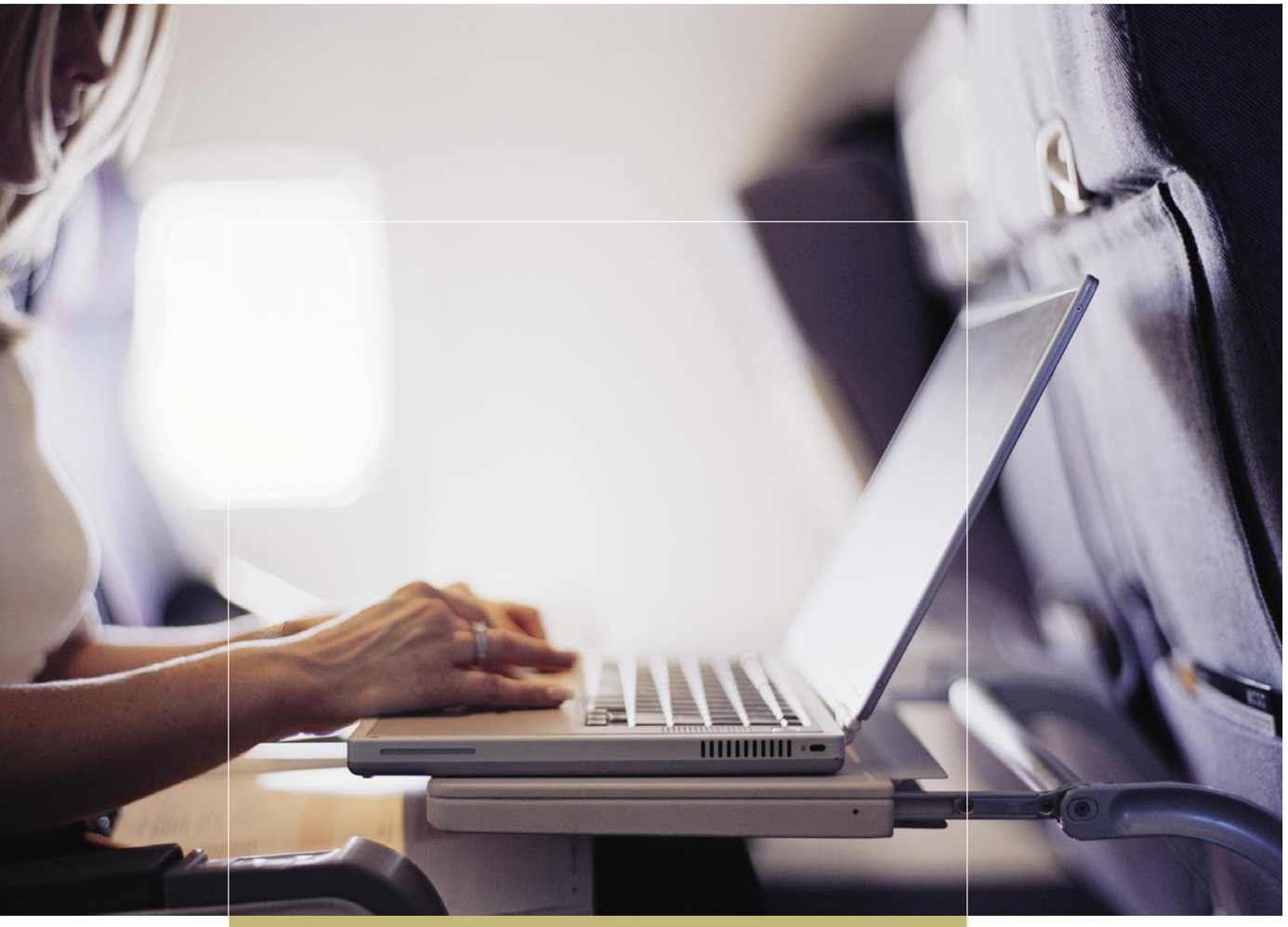
This report confirms how signatories have responded to their commitments. But it is also the last ETNO Environmental Report: from now on we shall report on the overall performance of signatories as members of the new Sustainability Charter.

But the key message will remain the same: together we can make a real difference. And we invite others to share our success.

Alfredo ACEBAL, ETNO Executive Board Chairman
Danilo RIVA, ETNO WG Sustainability Chairman

#1 A Caring industry

The EU telecoms operators' contribution to sustainable growth



In the previous report, we noted that by working together all can advance. We had no intention of resting on our laurels, and we haven't. Indeed, we have reinforced the commitments of existing signatories while expanding the number of companies joining the charter.

The scope of the charter has also been broadened, by including new provisions regarding corporate responsibility and sustainable development.

As ETNO's previous environmental report went to print in 2002 the European Commission was proposing a sustainable development strategy. Since then ETNO companies have contributed to this strategic debate, working to help achieve its goals in a number of ways.

Products and Services

ETNO member companies firmly believe that their products and services can only be economically successful in the long term if they are produced, sold and used in a sustainable manner. But we must also ensure that each of our companies is profitable. Therefore, economic considerations must be placed on a par with social and ecological concerns. The previous report highlighted the key role that e-communications services can play in offsetting Green House Gas (GHG) emissions linked to travel.

Energy consumption is the largest single environmental impact of every ETNO member company. Therefore it is the responsibility of all charter signatories to ensure that energy consumption is kept to a minimum. The range of products and services is expanding rapidly. In this context, keeping energy consumption to a minimum is more than ever a challenge of companies.

Charter members are keen to explore how they can make better use of clean, renewable energy supplies to power networks, even if the cost premium and lack of available renewable supplies in some countries makes it more difficult.

#1. A Caring industry

#1 A Caring industry

In recent months, the ETNO Sustainability working group has been gathering best practice data from all signatory companies. This is being used to communicate ETNO's environmental activities, namely to reduce GHG emissions, increase the purchase of renewable energy and invest in new technologies.

In addition, an energy task team, comprised of experts from ETNO companies has been set up to focus solely on energy matters. The team's work will focus on a wide range of energy policy challenges, such as how to

- contribute to national and global efforts to reduce GHG emissions
- improve energy management within the company
- provide the opportunity to market environmental practice
- enable significant savings in operating costs
- ensure companies remain competitive
- demonstrate the viability of voluntary actions
- work proactively with suppliers to improve equipment efficiency and drive down electricity consumption
- reinforce the dialogue and understanding between government, businesses and NGOs within the industrial sector.

Poverty and social exclusion

About 7% of Europe's population is chronically poor. Changes in the labour market, in skill requirements and in family patterns pose risks to vulnerable groups, with many problems concentrated in run-down city areas.

Beyond the mere provision of networks and services, the telecoms industry is playing an essential role in bridging the digital divide in relation to the Internet and contributing to social inclusion.

Access to information and communications technology (ICT) can improve people's lives and open doors to education, jobs, entertainment and personal contacts. But many people do not yet have the opportunity or the necessary skills to use this technology.

So how have we helped? Below is one case-study example:

In the UK, the project EverybodyOnline, supported by an ETNO charter signatory, targets disadvantaged communities across the country where levels of Internet connectivity and access to Information and Communications Technologies (ICT) are amongst the lowest in the UK.

Each community project is co-ordinated by a locally based project officer. The role of the project officer is to foster a network of local facilities, programmes, partners and volunteers. Using various forms of communication, the project officer will work with the local community to understand their needs and to create a co-ordinated local action plan to improve ICT skills and raise awareness of Internet benefits.

Initially funded by the company and Citizens Online, each project aims to become economically sustainable, contributing to the overall development of the community.

As the Internet grows, the more vulnerable parts of the population must be protected against potentially harmful online content. An example of action taken in this area is as follows:

One ETNO member company recently introduced a system to block access to websites containing images of child sexual abuse. One month after the system became operational, some 230,000 attempts to access illegal sites had already been blocked. The company also made the technology available to its competitors.

The technology blocks access to any website on a blacklist compiled by the UK industry body, the Internet Watch Foundation (IWF). The IWF blacklist relates to worldwide child sexual abuse websites that have been assessed as "illegal to view" in the country concerned under its child protection legislation. The list is compiled by IWF on strictly legal grounds, independently from the companies implementing the technology.

As a result of this initiative, the country's leading service providers have been invited to meet the political leaders in September 2005 to review lessons learned from the project.

#1 A Caring industry

Supply Chain

It is not always easy to monitor an entire supply chain regarding sustainability, but we have identified problem areas that demand attention. These cover a wide spectrum, including materials used, environmental compatibility of production processes, conditions in the workplace and the issue of child labour. It is incumbent on us to establish relevant ethical values for purposes of purchasing guidelines, while monitoring compliance with them.

Work in this area has been accomplished through ETNO's membership in the Global e-Sustainability Initiative (GeSI). The latter consists of Information and Communications Technology (ICT) service providers and equipment suppliers, working with the support of the United Nations Environment Programme (UNEP) and the International Telecommunication Union (ITU).

ETNO's work goes hand-in-hand with that of the GESI's. Indeed, certain ETNO charter's signatories have joined GeSI as individual members to engage directly with global issues and with manufacturers. Meanwhile, ETNO's participation in GeSI gives it access to examples of best practice throughout the industry, which, in turn can be shared with other members, enabling everyone to contribute to the sustainability agenda.

One example of best practice sharing is via the GESI's Supply Chain Working Group (SCWG), a group of ICT companies working together to determine how Corporate Social Responsibility (CSR) issues can be effectively integrated into the supply chain process.

The main purpose of the Working Group is to develop tools, management practices, processes and systems to deal with corporate responsibility (CR) supply chain issues, risks and opportunities while ensuring continuous improvement.

This working group aims to get ICT companies to establish a common approach to these matters. It commissioned an independent study from PricewaterhouseCooper's Sustainability Business Solutions division to research best practice in CSR supply chain management. The study has assessed the involvement of current working group members in CR supply chain issues and benchmarked these activities against sector-wide performance. The next step will be the development of a supplier's self-assessment questionnaire, the use of which is expected to benefit both industrial customers and their suppliers by:

- Raising supplier awareness about the importance of sustainability principles;
- Clarifying ICT customer expectations regarding their suppliers' sustainability practices;
- Supporting ICT customer assessments of supplier characteristics and potential risks;
- Enabling suppliers to evaluate, improve, and communicate their performance;
- Reducing the burden on suppliers of responding to multiple questionnaires.

Specifically, this analysis will profile typical best practice in CR supply chain management for an ICT company.

Ethical Purchasing in focus – an ETNO member company case study

Through its so-called Purchasing Principles, the company has established a framework to ensure that it acts responsibly in all business dealings with its global supply market.

With the help of a team of procurement professionals and environmental experts, the company reviewed its policies and processes. It resulted in the development of new environmental procedures applied to the supply chain since November 2002:

- An environmental contract clause –committing suppliers to working with the company towards continuous environmental improvement where required– is incorporated into all new contracts regardless of contract value.
- An online, post-contract award risk-assessment tool is used to evaluate all new suppliers' environmental policies and procedures.
- A pre-contract award questionnaire is completed by suppliers proposing to supply electronic and electrical products to ensure they meet forthcoming environmental legislation arising from the EU's Directives on Waste Electrical & Electronic Equipment (WEEE) and Restriction on use of Hazardous Substances (RoHS).
- Yearly environmental audits are carried out on the company's waste disposal contractors.

The company has also elaborated its own manifesto, "Sourcing with Human Dignity," in order to assess potential human rights shortfalls within the supply chain and ensure that suppliers take responsibility for improving working conditions where required. Therefore, 14 on-site supply chain assessments were conducted in 2003 in China, Sri Lanka, India and Taiwan to ascertain the extent to which suppliers met the Sourcing with Human Dignity standard.

#1 A Caring industry

Electromagnetic Fields

The development of wireless communications is now far beyond any initial expectation. However exposure to electromagnetic fields (EMF) is still perceived by the public as a potential threat to health.

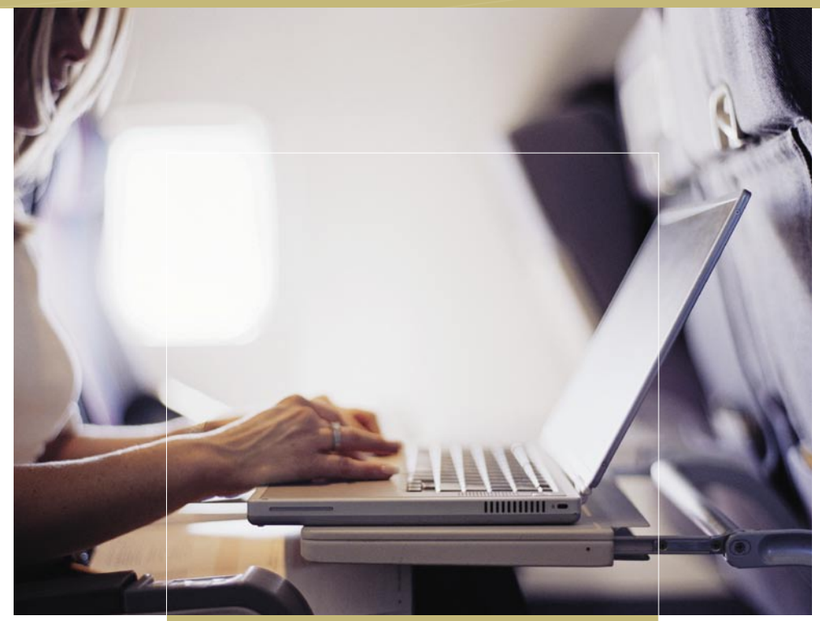
Similar to its past years' activities on health and electromagnetic fields, ETNO has contributed substantially to European policies, projects and scientific research to improve the social acceptance of mobile communications.

Most recent government-backed expert reviews conducted, for example, in Scandinavian countries, the United Kingdom and the Netherlands concluded that mobile telephony does not pose a risk to health but that further research was still necessary. Thus, the World Health Organisation's (WHO) standing opinion remains unchanged: «None of the recent reviews have concluded that exposure to the RF (radio frequency) fields from mobile phones and their base stations cause any adverse health consequences». Several ETNO members continue to provide considerable funding for independent health-related research on EMF.

ETNO members intensified their efforts to increase transparency and availability of information for the public, from both industry and public authorities.

Concerning the European Union's legislative and policy framework on EMF, ETNO has been in direct contact with EU institutions. The association has provided a steady stream of facts and advice to legislative bodies in order for the EU to base its Directive concerning «minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields)» on a sound scientific basis as provided by the International Commission on Non-ionising Radiation Protection (ICNIRP). ETNO has been given formal advisory stakeholder status in two of the European Commission's EMF projects. In the EMF-Net project funded by the Sixth Framework Program «Effects of the Exposure to EMF – From Science to Public Health and Safer Workplace», ETNO is advising on the coordination and evaluation of independent science and research on EMF. In the other project – European Information System on EMF (EIS-EMF) – ETNO is considering with the European Commission how to communicate best with stakeholders and the public on potential risks arising from EMF.

In cooperation with other industry organisations, ETNO stays committed to proactively and responsibly contribute to the EMF debate in the future.



Conclusions

As the European Union builds its sustainability strategy, ETNO will continue to contribute to the debate through its knowledge and expertise.

Beyond reporting about their own efforts to reduce the environmental footprint of their activities, charter's signatories are increasingly aware of the need to promote the positive role that a larger use of ICT solutions can play in contributing to a more sustainable society.

Such a wide-ranging awareness raising exercise can be successful only through close cooperation with all stakeholders involved, both private and public.

In this context, ETNO has recently embarked into a joint project with WWF to ensure that the potential of ICT is fully recognised in global climate change strategies.

#2 Making Progress Together

Environmental Charter signatories' progress report

Measuring the progress of Environmental Charter signatories against their commitments has been a key issue since the charter was launched. Accountability and transparency have always been at the baseline, as well as cooperation.

ETNO member companies, as the whole telecommunications sector, have undergone deep structural and organisational changes since the Environmental Charter was first launched in 1996.

In 1996 there were mostly individual companies, of which only a few were privatised. Now there are large and diversified groups, some of which have operations across many areas of the world. Furthermore, the use of sub-contracting has grown constantly, making data collection and reporting more complicated. It was therefore decided to set some boundaries to our environmental reporting mechanism: namely, that data provided by each operator must cover at least 80% of a company's operations in its home country in terms of both turnover and size of workforce.

The adopted reporting mechanism is irrespective of the number and size of the signators companies. They work together to continuously improve their environmental performance, and should be viewed as a whole. The following charts show the value of indicators for the last two years, as compared with the initial set of values, which referred to 1996. Twenty-five companies with an aggregated turnover in excess of 220 billion EUR have signed up to date. They were 21[2] in 1996, and as new signatories joined, the combined performance may have fluctuated since newcomers do not always have the same level of experience and organisation of existing signatories. Organisational changes have also played a major role in shaping the collective trends over time. However, no specific entry level has ever been required, since it has always been in the spirit of the charter to welcome new signatories any time and to share experience, practices and solutions with them.

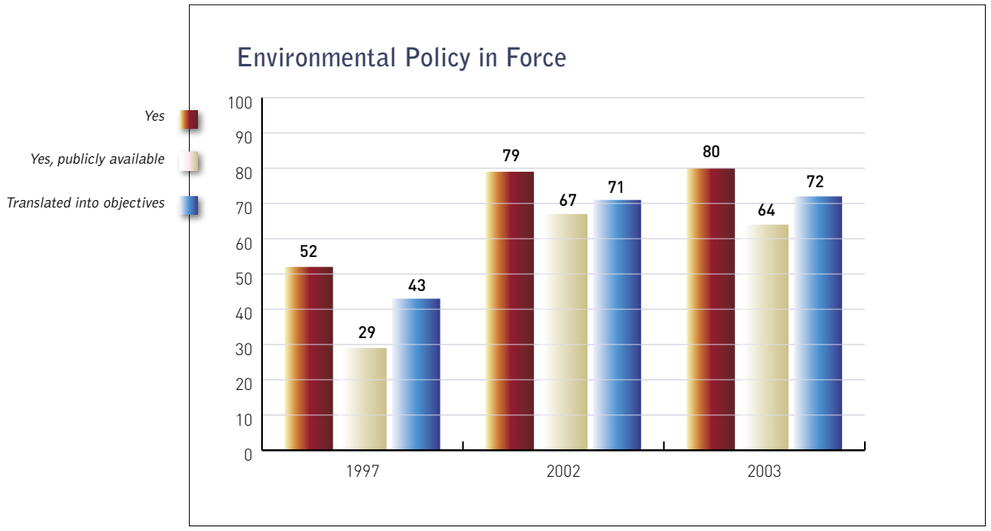
All indicators reflect the application of charter principles. The assessment of progress in environmental management, procurement, awareness raising is based on qualitative data collected from all signatories. Quantitative indicators (consumption, emissions, etc.) have been calculated taking into account the contributions of signatories that have proper mechanisms in place to monitor environmental parameters (an average of 21 signatories).

2/ In 1996 Telia and Sonera were two separate companies, and both were among the founding signatories of the Environmental Charter. Today, after their merger into TeliaSonera, they account for one single company.

#2 Making Progress Together

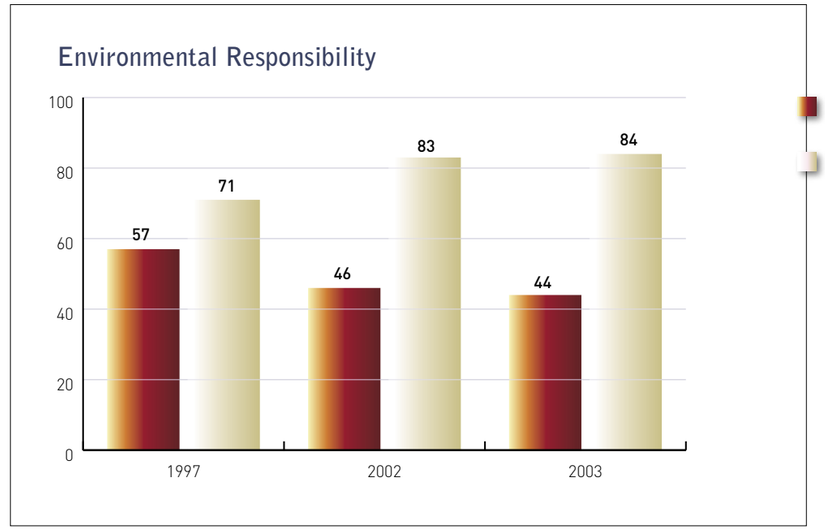
1. Environmental Organisation and Management

Environmental improvements require a top-to-bottom strategy and organisational commitment. Since the launch of the charter in 1996, there has been an increasing commitment to integrate environment protection within the business strategy. Despite the economic turbulences over the past years, this commitment has not declined by charter's signatories.

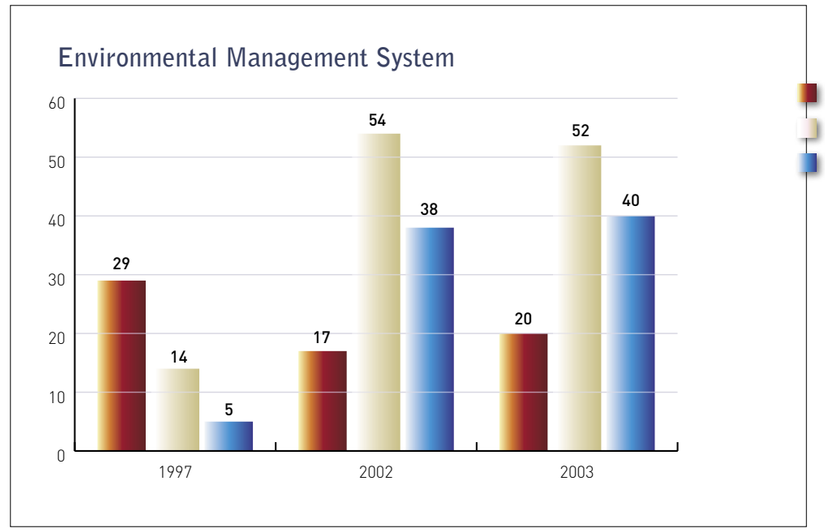


To properly deploy an environmental policy, its progress should be reported to top management. Appointing an Environmental Manager responsible for coordinating improvement programmes, and a Board member with specific environmental responsibility will turn strategy into practice and pave the way for easy and effective reviews of policy, actions and objectives.

Continuous business reorganisations in recent times have had a negative influence on companies' environmental performance. The best results were reached in 2001 when up to 72% of signatories had a main board member with specific environmental responsibility, and up to 96% had an environmental manager appointed. Despite the decline, however, many companies are reviewing their priorities and goals, and the situation will certainly improve again.



An Environmental Management System (EMS) is the main tool a company should use to continuously assess and improve its environmental performance. Putting one in place is one of the charter's commitments.

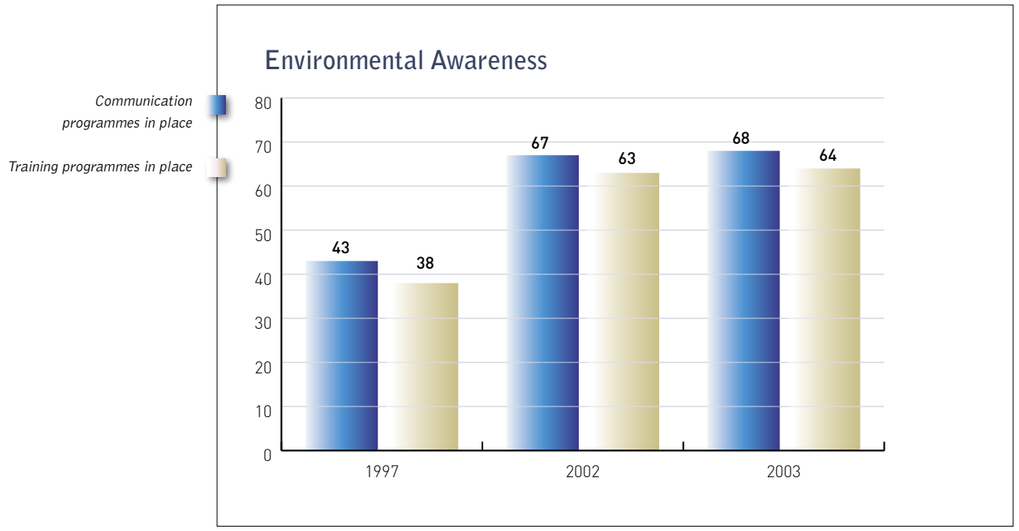


#2 Making Progress Together

The number of signatories that have recognised the importance of building their own EMS has steadily increased since 1997, with ISO 14001 being the main reference standard. The number of certified EMS systems has also been increasing, and more companies are working on environmental certification. Furthermore, 69% of charter signatories have today an environmental audit system in place, and in 19% of these cases it covers the whole company.

2. Environmental Awareness

Effective deployment of a company's environmental policy requires that all possible consequences and impacts of its operations are well known and understood, and that such knowledge and objectives are shared with all the employees. Indeed, their active support is essential to reach the goal of continuously improving environmental performance. Specific internal training programmes and communication initiatives must be set up. The first two indicators below provide evidence of the extent to which such tools have been implemented by signatories.



In 2003, for example, 68% of signatories had an internal communication programme in place. For 40% of the signatories, this was a company-wide effort. Another 4% had such programme under preparation. Similarly, for the same year, 64 percent of signatories had a training programme, but out of them only a third were applying it throughout the company. 12% of signatories had such programme under preparation.

3. Long Term Strategy

The capacity to innovate is the main strength of the telecommunications business: only through continuous innovation can the sector meet ever-increasing customer demands for more sophisticated products and services, while contributing to economic growth and better quality of life.

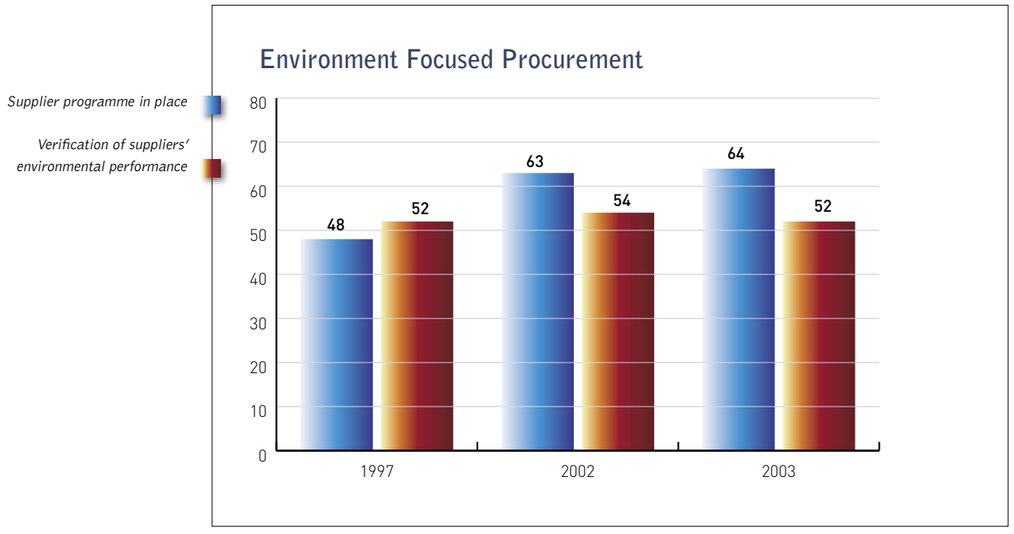
But innovative solutions must be developed by taking into account environmental considerations. Their positive contribution to environmental problems such as climate change must be understood, evaluated internally and then communicated to the public. Sponsorship of environmental initiatives, especially those where ICT can play an important role, can help build a positive corporate reputation and demonstrate how the industry carries its commitment to the environment beyond normal business considerations.

Eighty-four percent of signatories develop solutions that respect the environment, even if not systematically; 42% of them fund projects in environmental protection and 32% emphasise the positive environmental impact of marketed products.

#2 Making Progress Together

4. Procurement

Environmental responsibility is shared with suppliers: the large spending power of telecom companies puts them in a unique position to raise awareness and exert a positive effect on the whole supply chain. Cooperation with suppliers – whether as information exchanges or through joint development of products and services – always happens in close contact. It starts with an assessment of suppliers' environmental performance and moves forward from there by creating partnerships and specific agreements to apply an ever-expanding circle of environmental guidelines to the whole procurement chain.



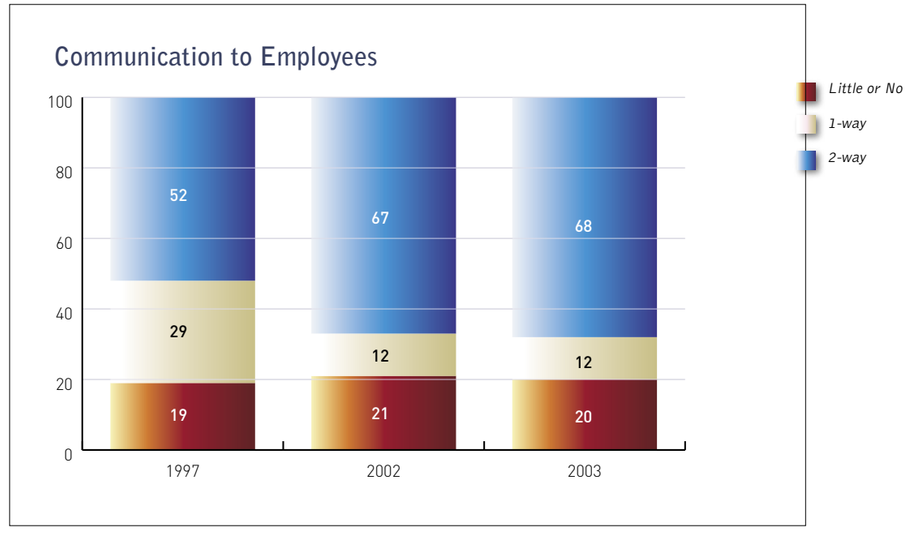
Slightly more than 50% of charter signatories verify suppliers' environmental performance. In 2003, 64% of signatories had a cooperation programme with their suppliers. For 24% of signatories this covers more than half of their total purchases.

5. Providing Information

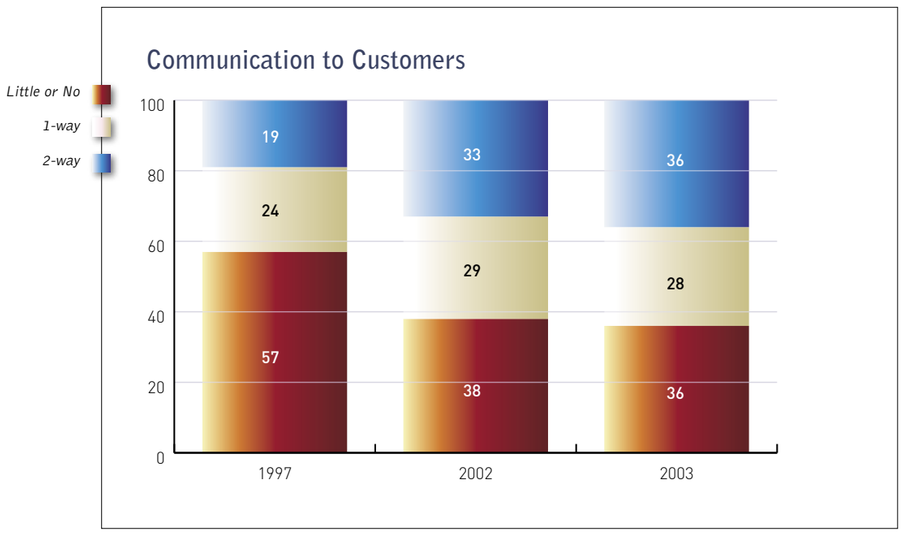
Meeting stakeholders' expectations is crucial in terms of business success and reputation. Effective communication with all stakeholder groups is the only way to understand exactly what such expectations are, and to explain what the industry can and will do to reach its goals.

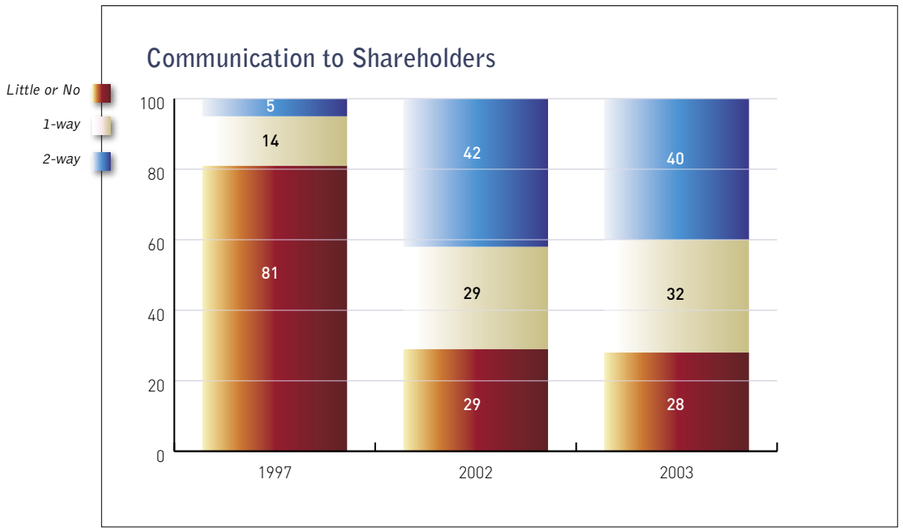
Communications with the four main stakeholder groups we have identified in our reporting mechanism is constantly improving, in particular regarding governments and institutions, with whom 76% of the signatories have established a constructive dialogue.

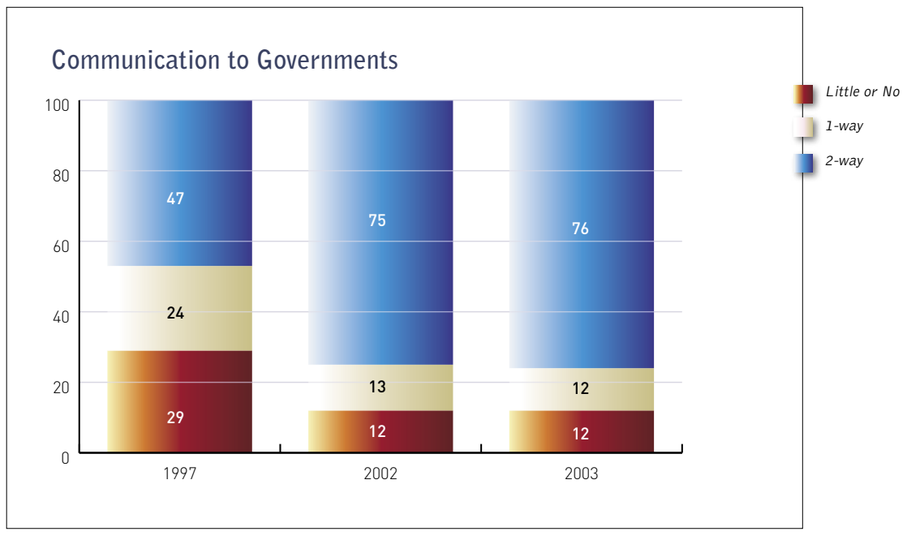
Fifty-six percent of the signatories regularly publish an environmental report, either as part of a wider sustainability report or as an individual document. Transparency and accountability are thus increasingly viewed as key issues in the relationship with stakeholders.



#2 Making Progress Together







6. Energy Use and Climate Change

Telecommunications networks use large amounts of electrical energy to power and cool equipment, as well as fuel to heat buildings and run sizeable service vehicle fleets. And the network energy demand is expected to increase as new services are introduced and the customer base broadens.

For such reasons charter signatories identify and apply innovative technical solutions to optimise their energy consumption. The experience gained is shared among them via a specific task force, whose objectives are to:

1. establish and maintain a network of energy experts committed to the use of benchmarking as a means of driving energy efficiency.
2. ensure efficient energy utilisation and the reduction of environmental impact through improved energy management.
3. contribute to national and global efforts to reduce GHG emissions.
4. provide an opportunity to market environmental practice and demonstrate the viability of voluntary actions.

#2 Making Progress Together

6.1 - Electricity

Two indicators are used to account for electricity use. The first one, $\mathbf{I}_{1.1}$, shows the trend of overall electricity management, where all signatories together are considered as one large single company, and is defined as follows:

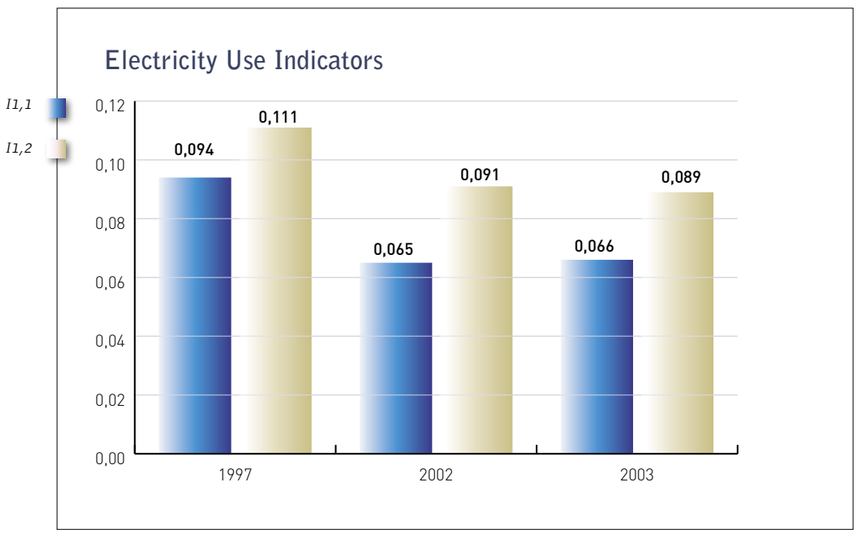
$$\mathbf{I}_{1.1} = \frac{\text{Overall Amount of Electricity Used}}{\text{Overall Turnover}}$$

The second one, $\mathbf{I}_{1.2}$, is the average of individual electricity management efficiency indicators, which vary considerably among signatories, and is defined as follows:

$$\mathbf{I}_{1.2} = \frac{\sum(\text{Amount of Electricity Used by each company / Company Turnover})}{\text{Number of Signatories}}$$

In both cases turnover, be it collective or individual, is used as a normalising factor to make calculations as independent as possible of companies' size.

Analysing the overall trends in time, it seems that overall electricity management efficiency ($\mathbf{I}_{1.1}$) is stabilising around a value of 0.065 MWh/1000 EUR, while the average individual electricity management efficiency indicator ($\mathbf{I}_{1.2}$) has slightly improved in the past two years, testifying that efforts by the companies have had a positive outcome.



The number of signatories that have recognised the importance of building their own EMS has steadily increased since 1997, with ISO 14001 being the main reference standard. The number of certified EMS systems has also been increasing, and more companies are working on environmental certification. Today 69% of charter signatories have an environmental audit system in place, and in 19% of these cases it covers the whole company.

6.2 - Vehicle Fuels

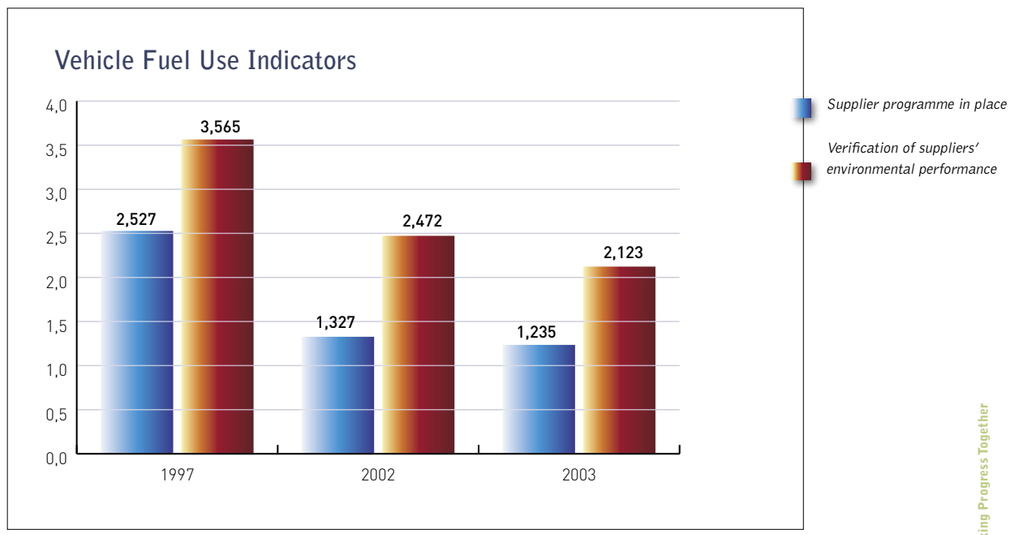
The approach followed to illustrate management of signatories' vehicle fleet is exactly the same. The two indicators used are:

$$\mathbf{I}_{1.1} = \frac{\text{Overall Amount of Vehicle Fuels Used}}{\text{Overall Turnover}}$$

and

$$\mathbf{I}_{1.2} = \frac{\sum(\text{Amount of Vehicle Fuels by each company / Company Turnover})}{\text{Number of Signatories}}$$

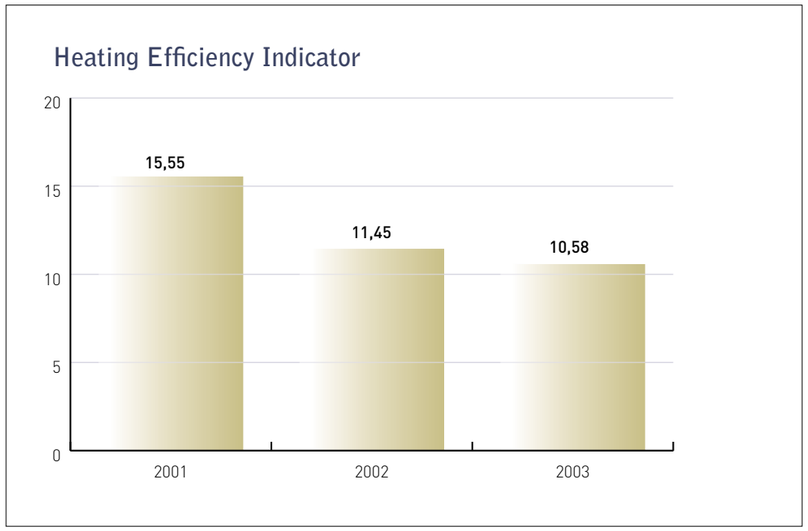
Vehicle management efficiency has steadily improved over time; this is due to both vehicle use optimisation and reductions based on the composition of companies' fleets (i.e., number of cars, average consumption). Replacing old vehicles with new ones, which leads to lower fuel consumption and reduced emissions, and outsourcing fleet management along with improved logistics planning have contributed to higher efficiency.



#2 Making Progress Together

6.3- Heating Fuels

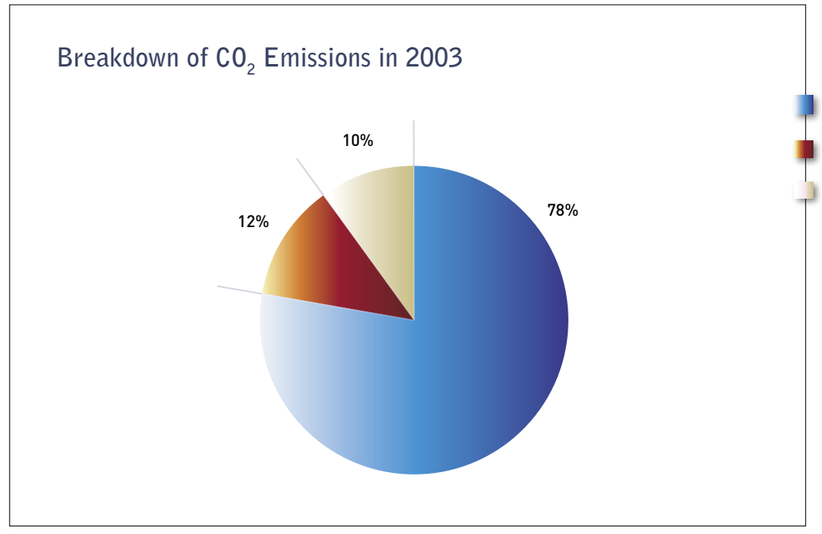
A new indicator, accounting for heating efficiency, has been calculated for the last three years. It pertains to the "one single company" model, and shows a very interesting trend: use of heating depends on geographical location and variable meteorological conditions, but the efficiency is increasing over time. More than 10% of the overall heating power used by the signatories comes from district heating.



6.4 - CO_2 Emissions

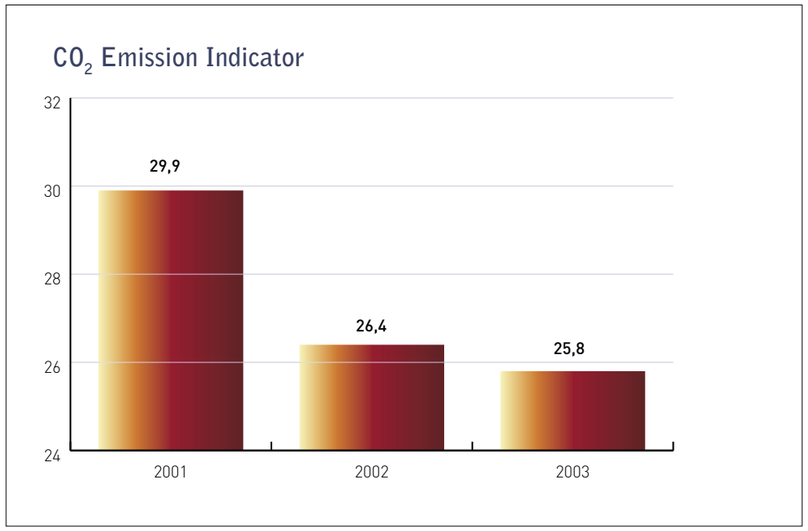
As in past years, carbon dioxide emissions have been calculated using the "one single company" model. As the below charts show, the main impact is due to the consumption of electricity, since most signatories operate in countries where fossil fuels are still the main source for electrical power.

The emission factors used come either from national inventories or from tables published in UNEP's "GHG indicator". District Heating contributions have not been included since details on the many different combinations possible for power generation were not available.



#2 Making Progress Together

Specific emissions, measured in grams of CO_2 per unit turnover, show a net decrease regarding this indicator's performance during the past three years.



Conclusions

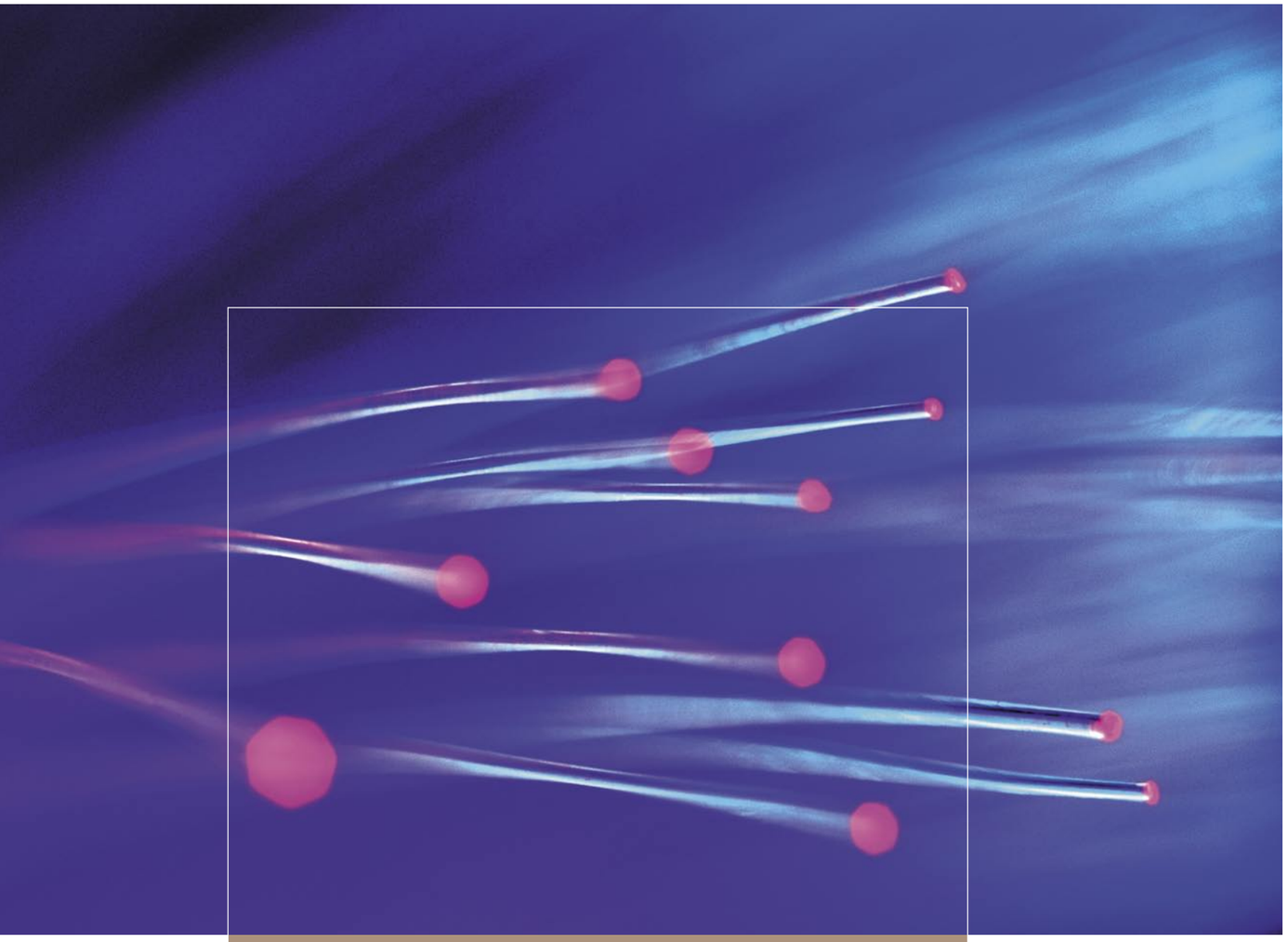
These charts and figures show that what was a visionary and ambitious project in 1996 has turned into a measurable success story. The 25 signatories of ETNO's Environmental charter have pulled together, with each – regardless of experience, size or geographical area of operations – providing a valuable contribution to the overall progress seen in this report.

Care for the environment is now part of signatories' individual business: it represents added value for both the companies and their stakeholders, as well as a way to improve their overall efficiency.

But a lot of work remains to be done, and opportunities for improvement are around every corner. We willingly accept this challenge and hope the charter's demonstration of commitment and good results will encourage other companies to join.

#2. Making Progress Together

#3 What's Ahead ?



1. Main trends in the ICT sector

In few other industrial sectors does one technological revolution succeed another as quickly as in e-communications. The telecoms industry is again at a crossroads as major technological developments are unfolding.

Collective demand for more sustainable products and services underpin these evolutions. New technological breakthroughs are also creating more opportunities for the ICT sector to contribute to sustainable growth. The most recent achievements in this fast changing field are broadband access, UMTS and Wi-Fi. These offer new tools to reduce the digital divide.

1.1 ICT – a sustainable breakthrough
Pushing the limits of velocity

The telecommunications industry is taking advantage of every step in large-scale integration in electronics. Products and services meet an increasing demand for size/weight reduction and functional enhancement. Among those needs, increasing the transmission rate for Internet connections and mobile communication broadband capacity are the most pressing ones.

Another market demand ICT service providers are receiving from their customers is to increase the ease in mobility. Wireless connections have improved in the home, at the office and outdoors.

#3. What's Ahead?

#3 What's Ahead ?

1.2 Convergence

New technologies not only have had a huge effect on the velocity and integration of services. They also allow better interfacing between different communication supports and technical devices. The network itself is now capable of performing functions for which users previously needed separate devices (answering machines for example).

Wi-Fi technology has resolved the arduous problem of multiple solutions in wireless connections. The new generation of products will generally support this high bit-rate connection standard, which means that any kind of device will be able to communicate: a Personal Digital Assistant (PDA) with a PC, a digital camera with a printer, etc., either within a local area network or through a wide area public access network.

With its enhancements of facilities and improvements in convergence, the usage of telecommunications becomes easier and meets the consumer's demand for mobility, integration and ease of use.

1.3 Benefits for the long term

ICT's evolution deserves a long-term analysis, regarding the benefits for the general public, professional users and companies' development. Both quantitative results and qualitative progress should be considered.

The design, manufacturing and operation of telecommunications equipment has evolved to less energy consumption all along the life cycle of products, including the dismantling and recycling processes. In numerous applications, the de-materialisation of services, allowing transactions through a remote communication or telecommuting, for example, leads to time saving and less fuel consumption in transport.

The resulting energy savings means lower impact on fossil resources and less pressure on the green house effect.

In addition, optimisation of production and operation processes allows cost savings which make telecommunications tools more and more affordable to less developed countries with low incomes population.

1.4 A sustainable breakthrough

Improving efficiency, mobility, speed and ease of use, are not all. There is something else at stake. Most of the benefits produce & by these improvements significantly influence the relationship between a person and his/her neighbourhood, or that a community and its social and cultural environment. Structures, organisations and behaviour are changing within families, companies and groups.

Another challenge arises from the risk of a worsening of the digital divide. While the information society is entering every sector of economic and social activity, it is essential not to exclude certain individuals or groups, who do not have direct access to modern communication tools.

Eventually, combining ease of use, enhanced features, energy saving and lower costs, and provided sufficient use is made of these new communication tools, the telecommunication products and services will bring, year after year, a more efficient way to support economic activity. It will also contribute to preserve the environment and tighten relation within and between human communities.

In one word: to make society more **sustainable.**

#3 What's Ahead ?

2. Challenges for European telecommunications operators

'What's ahead' for us as operators is not an easy question to answer. Undoubtedly, there will be supply and demand for many new products and services in this fast-moving field of ICT, such as Voice over IP, broadband, UMTS, etc. Whatever the changes, the current revolution in the industry will reflect on ETNO's activities and its role towards its members.

There are several areas where ETNO can and has to play a role for its members if we are to take our new Sustainability Charter seriously:

- Environmental policy;
- European policy;
- Reporting;
- Improved environmental performance.

Environmental policy

By joining the charter, telecom operators (the charter is also open to non-ETNO operators) commit themselves to its environmental and sustainability goals. One of the key benefits of signing is that through sharing best practice, more advanced companies are able to assist less advanced ones to meet these commitments. This cooperation will contribute to improve the overall results of signatories collectively.

European Policy

ETNO has been closely following the development of European policy in particular to promote the contribution that ICT can bring to the Lisbon process and the Sustainable Development strategy where the industry can play a catalyst role.
Regarding more specifically the environmental regulation, ETNO will make sure that they are based on sound scientific evidence and that the precautionary principle will be applied in a proportionate manner, allowing for the necessary innovation in a fast changing industry. ETNO has also given particular attention to the WEEE directive, and will closely monitor its implementation in the different member states to make sure that there are not unnecessary constraints to the development of a competitive European market for the products that its members propose to their customers.

Finally ETNO has maintained regular contacts with the various DGs of the European Commission engaged in the definition of the environmental regulatory framework in which the industry and its customers will have to act in the coming years.

Reporting - Our accountability

Improved reporting is a continuous process. Transparency is the keyword, which can lead to more and/or better indicators.
For example, energy is one of our main impacts. Due to the changing nature of our businesses, i.e. upgrading our networks to VoIP, we fully expect energy figures, as currently defined, to grow in the coming years. However, if the data were to be presented in a different way—e.g., as consumption related to the growth in activities and services—it may show that we are actually producing a decrease. For this reason, we will review all indicators to ensure they remain suitable to their purpose. In addition, we will carry out studies to identify new possible areas of activity to monitor ratios such as energy use per Gbit of data carried. Once approved by our members and tested, new indicators will be added to the report.

Environmental results

There are several major areas where the telecommunication industry can contribute to a better environment. The most important is our sector's reduction of carbon dioxide (CO_2) emissions.

ICT contributes to the sustainable use of resources and well managed companies understand this. We set a first example by our 'own use' of innovative products and services, and then encourage an accelerating take up and use of such solutions by our customers. This, in turn, will help other industry sectors, as well as private citizens, to reduce their environmental footprint and improve quality of life.

As ETNO highlighted in its manifesto – "ETNO's vision for the future"[3] – ETNO member companies are directly contributing to Europe's sustainable growth, while fulfilling their commitment to the Environmental Charter.

Therefore ETNO has begun benchmarking projects in areas such as electricity and fuel-consumption. In this way, signatories work together with suppliers to develop, for example, a network switching architecture that is more sustainable, uses less energy and has improved air cooling. Other initiatives may also lead to reduced energy usage in office buildings and increased employee awareness of the contribution that a workforce can make to a company's energy reduction programmes.

3/ ETNO's manifesto – "ETNO's Vision for the future" was published in February 2005 in view of the adoption by EU Heads of States and Government of the renewed Lisbon agenda. The publication can be downloaded from ETNO's web site: www.etno.be

#3 What's Ahead ?

Benchmarking in all areas where there is a common approach will deliver improved working methods and techniques, and contribute to ETNO's charter goals.

By translating such approach into ETNO targets, the association will assist its members in cooperating in the field of sustainability to ensure that results are delivered.

3. The Sustainability Charter

When ETNO launched the Environmental Charter eight years ago, no one could foresee how it would evolve. During these years liberalisation of Europe's telecom market has proceeded at an unprecedented pace, creating opportunities but also constraints.

Telcos everywhere – not just in Europe – have undergone a thorough transformation. There have been countless mergers and acquisitions; competitiveness has considerably increased ; and a variety of new products and services has been introduced to satisfy the widest range of customer needs. The product-to-market cycle has become critical, as well as prices and quality.

ICT has the ability to completely change the way we live, enjoy life and conduct business. However, an overestimation of the possible penetration of advanced ICT services and consequent revenues, linked to stagnation of economies at global level, is seriously putting at stake jobs, investments and development. In recent years, telecommunications operators across the world went through an important reorganisation process. However this has not undermined their commitment to sustainability and environmental protection has remained a major commitment of ETNO member companies.

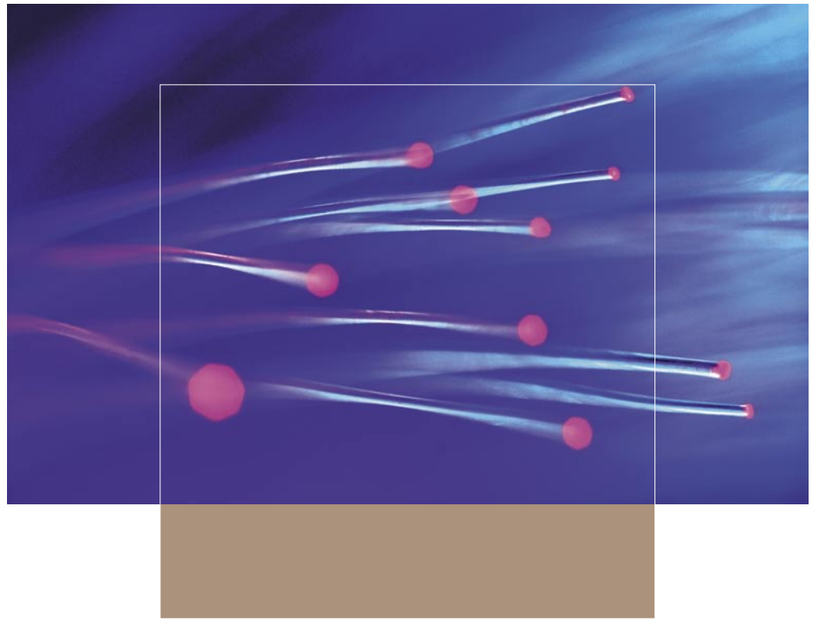
Indeed, ETNO has prepared its next move. Business remains our goal, but the way we do business will guarantee a future for our industry: business must be sustainable. Corporate sustainability is a business approach that creates long term stakeholder value, since it means harnessing the market potential for products and services that respond to the world's increased need for an improved quality of life via environmental, social and economic growth. Sustainable business means reducing or avoiding costs and risks by managing operations in a responsible and accountable way.

With this in mind, ETNO has decided to respond to the many signals from its stakeholders by broadening its collective commitment and entering a new dimension of competitive values: the Sustainability Charter of European Telecommunications Operators is now a reality. It is yet another solid demonstration of ETNO's continuing effort to raise awareness amongst its membership by providing companies with initiatives and tools to deliver value to stakeholders while seeking excellence together.

Unveiled in November 2004 at ETNO's first European Conference on Telecommunications and Sustainability, the new charter enlarges existing environmental commitments to a wide range of Corporate Social Responsibility principles. ETNO's new Sustainability Charter replaces the association's original Environment Charter. Some of the current signatories realised they would need more time than others to prepare their sustainability strategy and will therefore join the new Charter later. But in any case, they will be not left behind, as we will work all together to provide mutual assistance and "positive pressure."

Similar to its predecessor document, the Sustainability Charter also will be open to non-ETNO members: we want to share its value with any European operator that understands the importance of such commitment.

Therefore we invite all our colleagues and other operators to join us in our on-going effort to build a sustainable future.



#3. What's Ahead?

#4 The Environmental Charter

of the European Telecommunications Network Operators

Our Vision

Sustainable development is a strategic global environmental goal. It embraces development that takes into consideration the need to conserve both the natural environment and the world's scarce non-renewable resources for future generations. It is our belief that we can play an important part in making this happen.

This Charter describes our commitment to sustainable development through:

- the provision of products and services that provide significant environmental benefits; and
- a determination to manage our own operations in a way that minimises negative environmental impacts.

Our Approach

We recognise that the universal presence of telecommunications in today's society places on us a social obligation to be good corporate citizens. A responsible attitude to environmental issues is an important part of meeting that obligation.

As a collective group of companies, our combined turnover represents a significant proportion of European trade and this puts us in a unique position to make a real difference.

#4. The Environmental Charter

#4 The Environmental Charter

Our Commitment

Whether together or individually, we are committed to continuous improvement through action in the following areas:

1. Awareness

We shall aim to ensure recognition and acknowledgement of all relevant environmental impacts, including the positive and negative impacts of our products and services. In particular we shall build the environment into our training programmes and company communication programmes.

2. Regulatory compliance

We shall strive to achieve full compliance with all relevant environmental legal requirements, and to exceed these requirements where appropriate.

3. Research and development

We shall support research and development for the contribution new telecommunication services can make to sustainable development.

4. Procurement

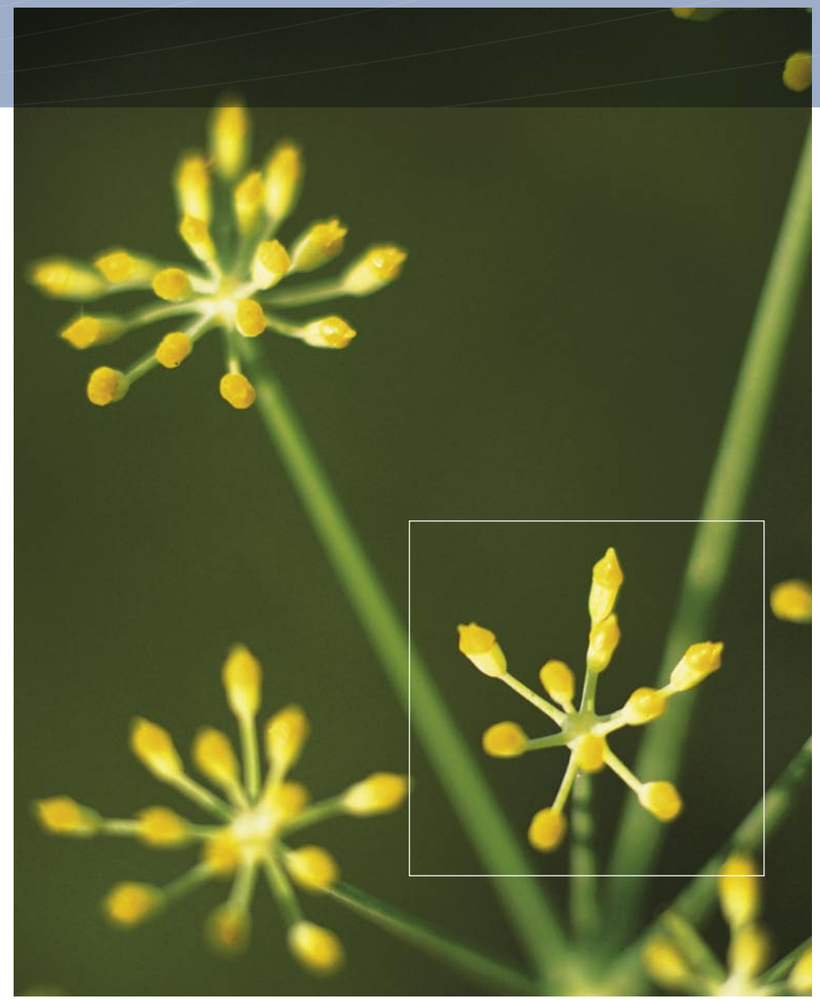
We shall build environmental considerations into our procurement processes. Special attention will be paid to: energy-consumption, waste management, process and product requirements, and the use of hazardous materials.

5. Providing information

We shall provide relevant data and information about our environmental performance to employees, customers, shareholders and governments.

6. Environmental management systems

We shall implement environmental management systems which support the development of appropriate and well-structured environmental protection.



All companies signing the charter should aim to have an environmental policy statement, a management board member with specific environmental responsibility, and environmental manager(s) with designated responsibility for co-ordinating programmes of continuous environmental improvement.

All European public telecommunication operators are encouraged to support the charter and, as a demonstration of their commitment, all companies are individually invited to sign up to the charter principles.

#4. The Environmental Charter

The Signatories

Belgacom
(Belgium)

Croatian Telecom

Finnet Group (Finland)

Magyar Telekom
(Hungary)

Swisscom

Telefónica
(Spain)

BT (British Telecom)

Cyprus Telecommunications
Authority

France Telecom

Portugal Telecom

TDC
(Denmark)

Telekom Austria

Cable & Wireless

Deutsche Telekom

Koninklijke KPN

Romtelecom

Telecom Italia

Telenor
(Norway)

Cesky Telecom

Elisa Corporation
(Finland)

Maltacom

Slovak Telecom

Telekom Slovenije

TeliaSonera
(Sweden-Finland)

Türk Telekomünikasyon

About ETNO

Michael Bartholomew, ETNO Director

Based in Brussels ETNO – the European Telecommunications Network Operators' Association – is the industry leading policy voice. It represents 41 major European telecommunications companies in 34 countries, inside and outside the EU.

ETNO members account for an aggregate annual turnover of more than 210 billion Euros and employ over one million people across Europe[4].

ETNO members deliver a comprehensive and growing range of electronic communications solutions, including both traditional services, such as fixed or mobile voice, and innovative data products. They provide value for customers based on high quality service, creativity and innovation.

ETNO members heavily invest in tomorrow's technologies with a clear long-term commitment to contribute to building a more sustainable society, ETNO member invest annually about 30 billion in infrastructure and technologies, underpinning the future deployment of broadband. They devote a significant amount of their resources to research, development and innovation, paving the way for the future.

ETNO is a key interlocutor on a wide range of regulatory and technical matters related to the sector. The association also takes part actively in the debate on issues such as environmental protection and sustainability, Internet governance, network security, data protection and network numbering and addressing

For more information: ***www.etno.be***

4/ ETNO data

Useful Links

- **Digital Europe** — www.digital-eu.org
- **Dow Jones Sustainability Indexes** — www.sustainability-index.com
- **ETNO** — www.etno.be
- **United Nations Environment Programme** — www.unep.org
- **The Global Compact** — www.unglobalcompact.org
- **The European Environment Agency** — www.eea.eu.int
- **Europa – The European Union On-line** — www.europa.eu.int
- **European Information & Communications Technology Industry Association** — www.eicta.org
- **The Global e-Sustainability Initiative** — www.gesi.org
- **FTSE4Good** — www.ftse4good.co.uk
- **International Telecommunications Union** — www.itu.int
- **World Business Council for Sustainable Development** — www.wbcsd.org
- **Global Reporting Initiative** — www.globalreporting.org
- **GSM Europe** — www.gsmworld.com/gsmeurope
- **Mobile Manufacturers Forum** — www.mmfai.org
- **World Health Organisation** — www.who.int/en

Acknowledgments

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Considerable editorial support, assistance and encouragement were provided by Leo Debecker and Thierry Dieu of the ETNO Office in Brussels.

Finally, many thanks to the signatories of the Environmental Charter of European Telecommunications Network Operators' Association for their continuous cooperation, faith, commitment and persistence, without whom no improvement – and the bi-annual public ETNO's environmental reports – would have been possible over the years.

November 2005