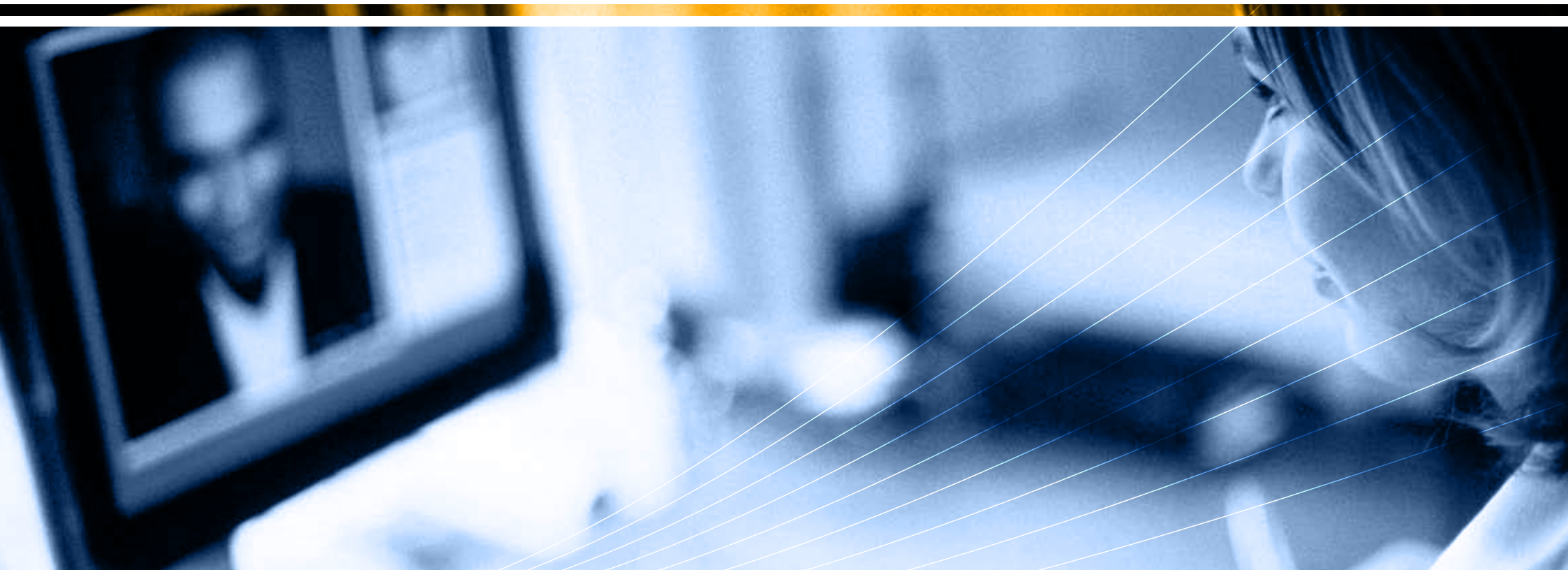


Facts & Figures about European Telecoms Operators



3rd edition - September 2008

European Telecommunications Network Operators' Association



ETNO has been the voice of Europe's telecommunications network operators since 1992.

Its 41 members in 34 countries collectively account for a turnover of more than €270 billion and one million employees. ETNO members also hold new entrant positions outside their national markets. ETNO brings together the main investors in innovative and high-quality e-communications platforms and services. They represent 70% of total sector investment.

ETNO closely contributes to shaping the best regulatory and commercial environment for its members to continue rolling out innovative and high quality services and platforms for the benefit of European consumers and businesses.

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1 Introduction

ETNO, the voice of the leading European telecommunications network operators, is pleased to issue the third edition of its yearly Facts and Figures report.

This year's brochure consists of several sections. The first one, compiled with the help of IDATE, the European Institute for Telecommunications and Audiovisual Media, gives an overview of ETNO members' revenue and investments for both 2006 and 2007.

The second section provides concrete examples of new services developed by our members and their contributions to a more sustainable society through applications and initiatives in the field of e-health, disabilities, digital literacy, assistance to elderly and environmental protection.

The investment data confirms the commitment of ETNO members to innovation and investment in new networks and services. With 70% of total sector investment, our operators remain the main drivers of e-communication innovation in Europe, despite slower revenue growth and global economic uncertainty.

Innovation and new service development continue to follow the trends towards an increasingly seamless, content-driven and interactive usage of Internet. This year's edition of facts and figures focuses on the new wireless and mobile broadband access services, innovative content offerings and Web 2.0 solutions launched by ETNO member companies.

A new section in the brochure deals with the international dimension. ETNO members have become pan-European and global e-communications service providers. With their presence on all five continents, ETNO members directly contribute to Europe's competitiveness on the global scene and to the promotion of the European vision of an information society for all.

We trust this brochure can contribute to the current policy debates and serves to underscore the important contributions of ETNO members to improving our daily lives.

Michael Bartholomew, ETNO Director





KEY FACTS & FIGURES

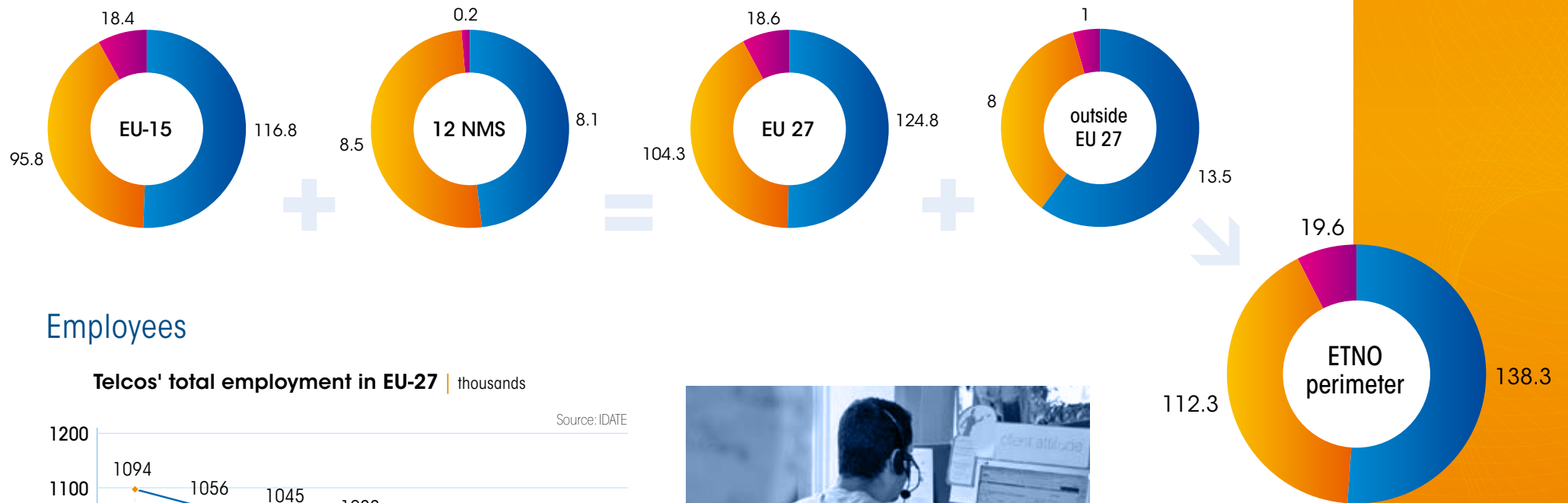
- ETNO represents 41 operators in 34 countries¹, far beyond the current boundaries of the European Union.
- ETNO members' total revenue from European operations amounted in 2007 to a total of € 270.2 billion.
- Fifty one per cent of the turnover originates from fixed line operations, and 41% from mobile services.

¹/Belgacom, BH Telecom (Bosnia and Herzegovina), BT (British Telecom), BTC (Bulgarian Telecommunications Company), Croatian Telecom, Cyprus Telecommunications Authority (CYTA), Deutsche Telekom, P&T Luxembourg, Eircom, Elisa Communications Corporation (Finland), Elion (Estonia), Finnet Group (Finland), France Telecom, Go (Malta), Invitel (Hungary), Koninklijke KPN, Lattelekom (Latvia), Makedonski Telekom (F.V.R of Macedonia), Magyar Telekom (Hungary), Netia Holdings (Poland), ONO (Spain), OTE (Greece), Portugal Telecom, Romtelecom, Síminn (Iceland Telecom Ltd.), Slovak Telecom, Societatea Nationala de Radiocomunicatii (SNR-Romania), Swisscom, TDC (Denmark), TDF (France), Telecom Italia, Telefónica, Telefónica O₂ Czech Republic, Telekom Austria, Telekom Slovenije, Telekomunikacja Polska, Telenor (Norway), TeliaSonera (Sweden-Finland), TEO (Lithuania), Türk Telekomünikasyon (Turkey), VIPNet (Croatia).
Observers: AT&T, Verizon (USA)

Repartition of ETNO members' turnover (Billion €)

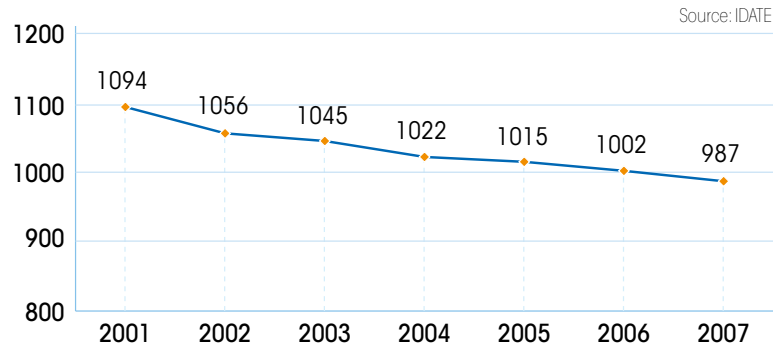
Source: IDATE

	EU-15	12 NMS*	EU-27	outside EU-27	ETNO perimeter
2007 European turnover (bn €)	231.0	16.7	247.7	22.5	270.2
■ of which (o/w) fixed	116.8	8.1	124.8	13.5	138.3
■ o/w mobile	95.8	8.5	104.3	8.0	112.3
■ o/w other (non core. corporate. etc.) **	18.4	0.2	18.6	1.0	19.6



Employees

Telcos' total employment in EU-27 | thousands



* NMS : New Member States

** relates to revenue from non-core activities such as broadcasting or directories.

3

Telecoms sector : a key pillar to the EU economy

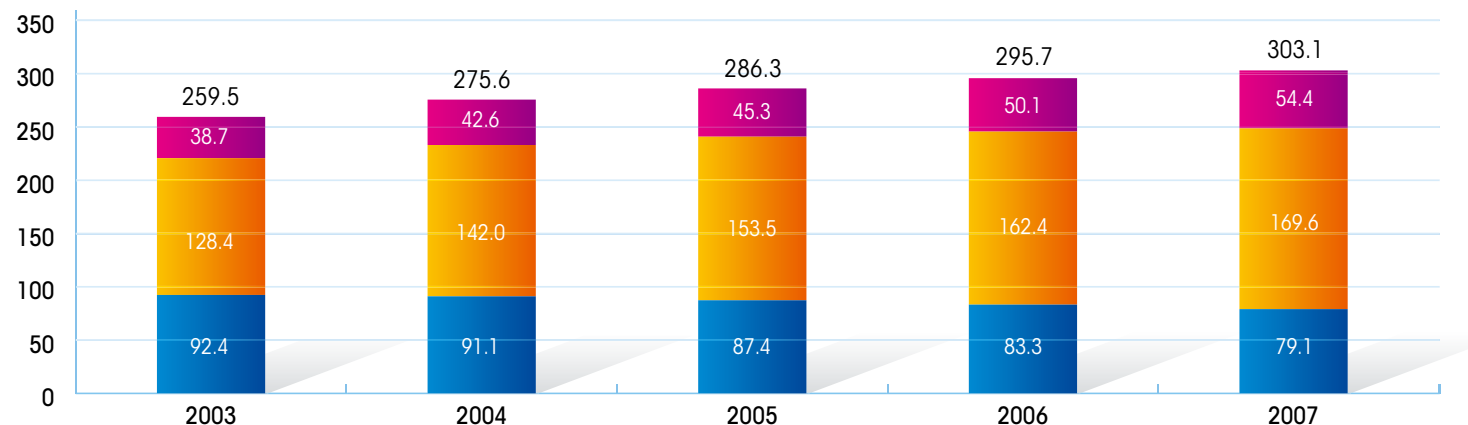
- The telecoms sector accounts for about 40% of the total revenue of the ICT sector². Revenue streams continue to shift from traditional fixed voice services to mobile voice and broadband.

Total telecom services revenues in Europe¹

Telecom service revenues in Europe (incl. Turkey, excl. Russia) | billion €

Fixed telephony Mobile services Data & Internet

Source : IDATE

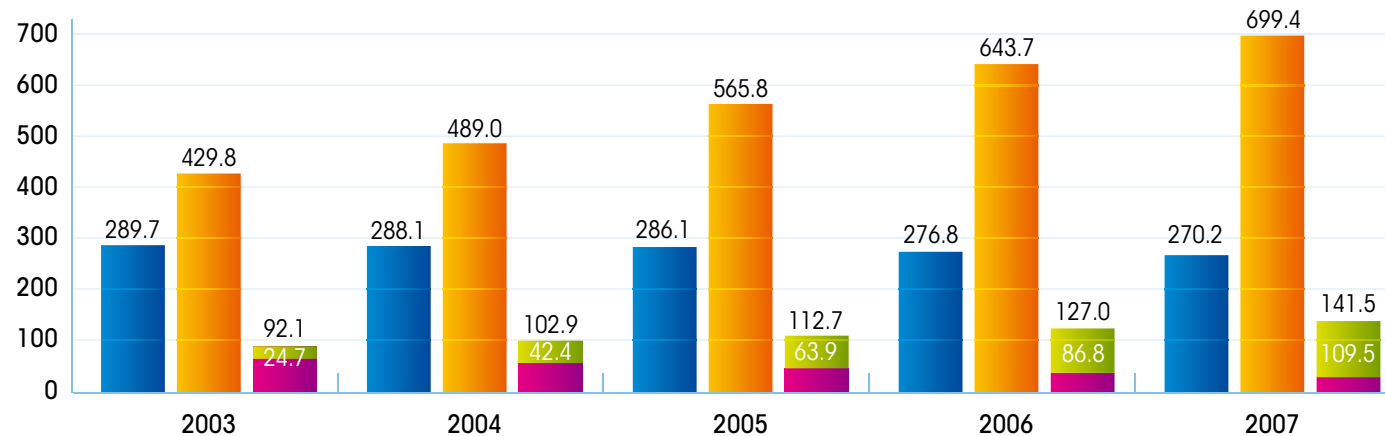


Access to telecoms services in Europe

Telecom accesses in Europe (incl. Turkey, excl. Russia) | million people

Source : IDATE

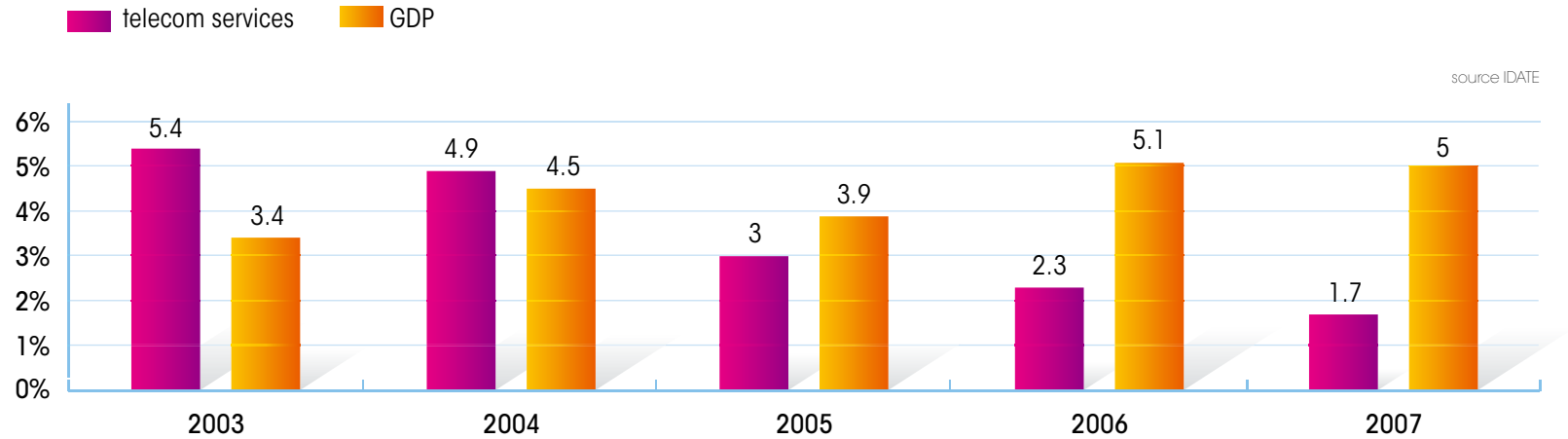
fixed access lines Mobile subscribers internet subscribers of which broadband subscribers



^{1/} Data refer to all telecommunications services providers established in Europe.

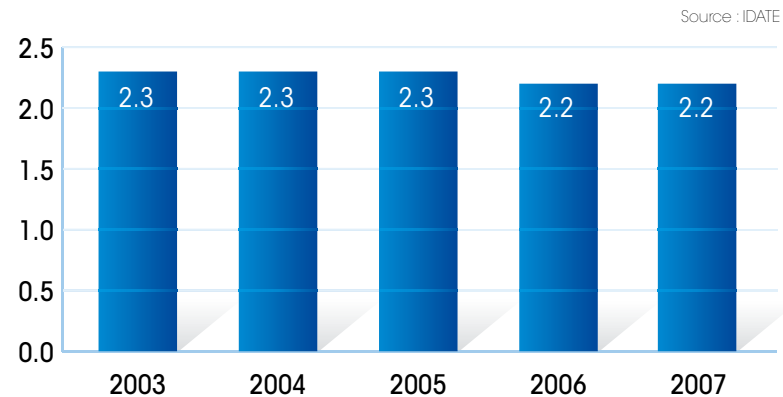
Growth (compared with GDP growth)

Growth of telecom services in Western Europe (compared with GDP growth)



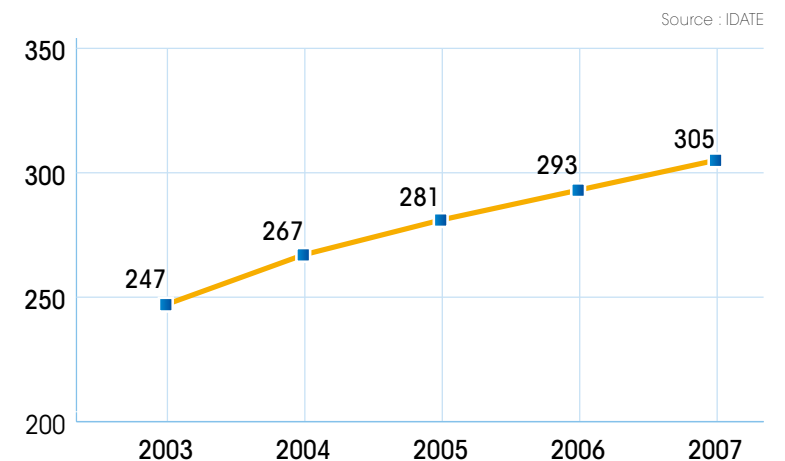
% of GDP

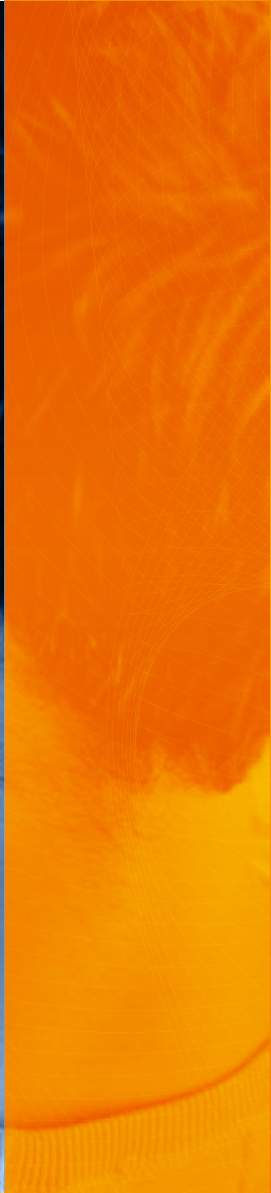
Telecom services as a % of GDP in Western Europe



Productivity (%)

EU-27 telcos' productivity | revenues per employee (000 EUR/ year)





4

Investing in the future



4.1 ETNO MEMBERS' INVESTMENT DATA

Through their investment in tomorrow's infrastructure and services, ETNO members are key players in Europe's Information Society.

In 2007, total tangible investment (CAPEX) in the telecoms sector in the countries covered by ETNO membership amounted to 47 billion €. This represented an increase of 1.4% in comparison to 2006, which demonstrates a slow down compared to 4.1% investment growth in 2006. Investments in fixed networks and service grew more significantly (25.1 billion €/ +4.9%) than in the mobile sector (21.9 billion €/ - 2.3%).

The five main European markets (Germany, UK, France, Italy and Spain) account for 65% of this total investment (69.3% for fixed and 60% for mobile) but their weight is reducing consistently since 2005 as investments tend to grow less than the European average. In 2007, investments in the five main markets have dropped compared to the previous year (-3.8%), mainly due to a significant reduction in mobile-related expenditure (-9%). In the fixed sector, investment growth is also significantly lower than the average (+0.4% against 4.9% in the average).

ETNO members (on their respective national markets and on other EU markets) account for more than 72% of the total investment effort. They are particularly represented in the fixed sector with 83% of investment. ETNO members and their sister companies represent close to 60% of mobile investment. In the two segments, ETNO members have invested more than the average.

Investment of ETNO members represented on average 12.6% of their turnover. The share of revenue dedicated to investment is more significant in the fixed (15.1%) than in the mobile sector (11.7%).

Significant differences can be observed between countries. Generally, operators in new member states tend to devote a bigger share of revenue to investment than their counterparts in the old member states - respectively 24 and 12%. This difference is even stronger in the mobile sector – respectively 29 and 10%.

Source : IDATE

ETNO members' investment Tangible CAPEX | billion €

	EU-15	EU-27	ETNO perimeter	12 NMS	Outside EU-27
2006 European	27.8	31.4	33.0	3.6	1.6
2007 European	27.9	32.0	34.0	4.1	2.0

Source : IDATE

Repartition of ETNO members' investment

2007 European Capex (bn €)	EU-15	EU-27	ETNO perimeter	12 NMS	Outside EU-27
o/w fixed	18.0	19.6	20.9	1.7	1.2
o/w mobile	9.9	12.3	13.1	2.4	0.8

Source : IDATE

Part of turnover devoted to investment

2007	EU-15	EU-27	ETNO perimeter	12 NMS	Outside EU-27
Tangible CAPEX/turnover	12%	13%	13%	24%	9%
fixed	15%	16%	15%	21%	9%
mobile	10%	12%	12%	29%	9%

Source : IDATE

Examples of new network developments



Users' requirements for faster broadband are rapidly growing as services such as multiple TV boxes, high definition television, movie and music downloads, online gaming, homeworking, social networking and security applications are increasingly driving consumer demand.

Several ETNO members announced or started Fibre deployments, including **France Telecom** that initiated FTTH roll-out in 2007 in five cities in Hauts de Seine and six districts in Paris; **Latt Telecom**; **Telefónica**; **TEO** (Lithuania); **Telenor** in Norway; **Portugal Telecom**. **BT** announced a plan to connect up to 10 millions households to high speed broadband, combining fibre to the premises or the cabinet, depending on the area. **Telekom Slovenije** is rolling out FTTH and also VDSL2 networks. **Swisscom** is launching FTTB and FTTH projects. **TeliaSonera** is launching a new infrastructure project to cover between 1.5 to 2 million households and enterprises all over Sweden, based either on fibre or VDSL2 technologies depending on the geographic circumstances and the market's needs. **Slovak Telekom** aims at increasing households' access to its Triple Play (Magio) service through ADSL 2+ or FTTx.

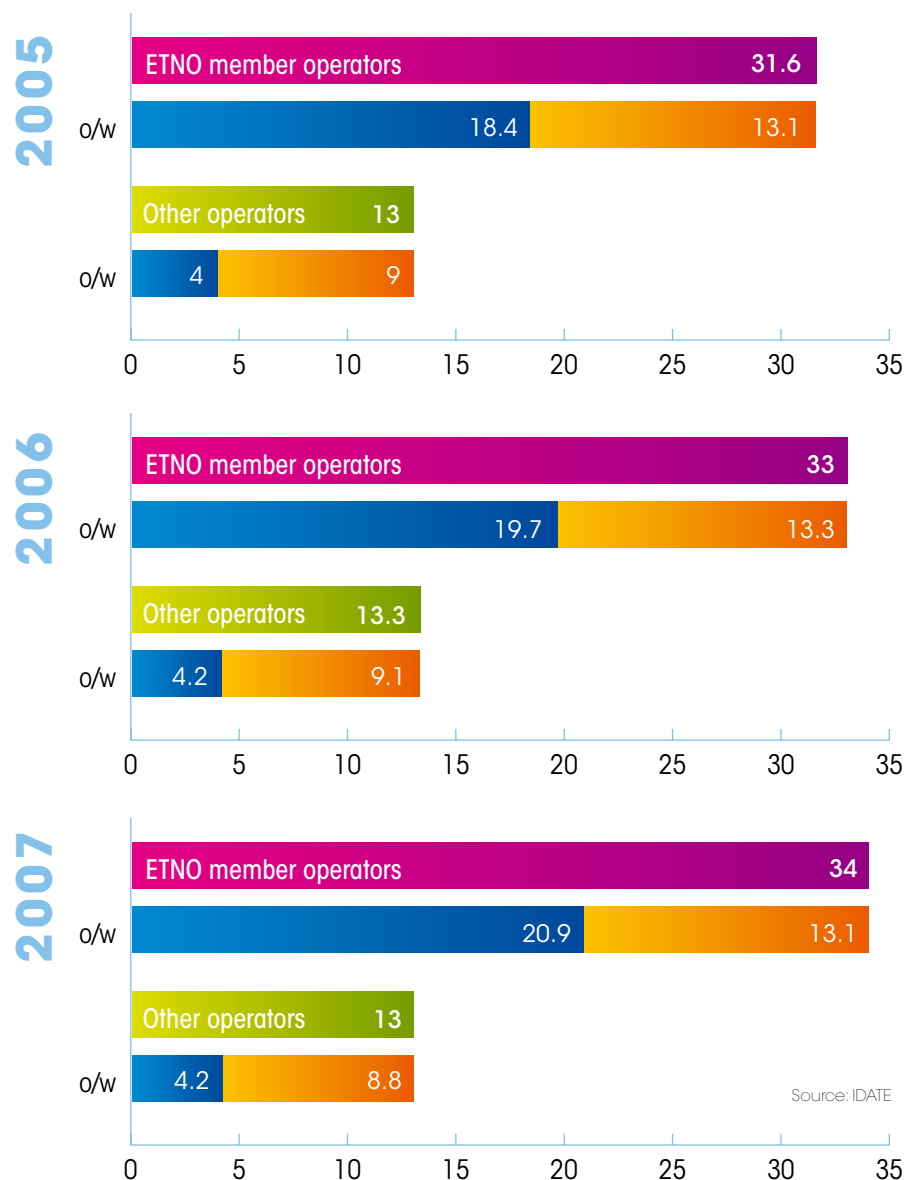
Many members are involved in the roll out of VDSL networks, including **Deutsche Telekom**, **KPN**, **TDC** and **Magyar Telekom**.

Turk Telekom has recently launched a new generation vDSL2 (Very High Speed Digital Subscriber Line 2) service, allowing to offer up to 32 Mbp/s.

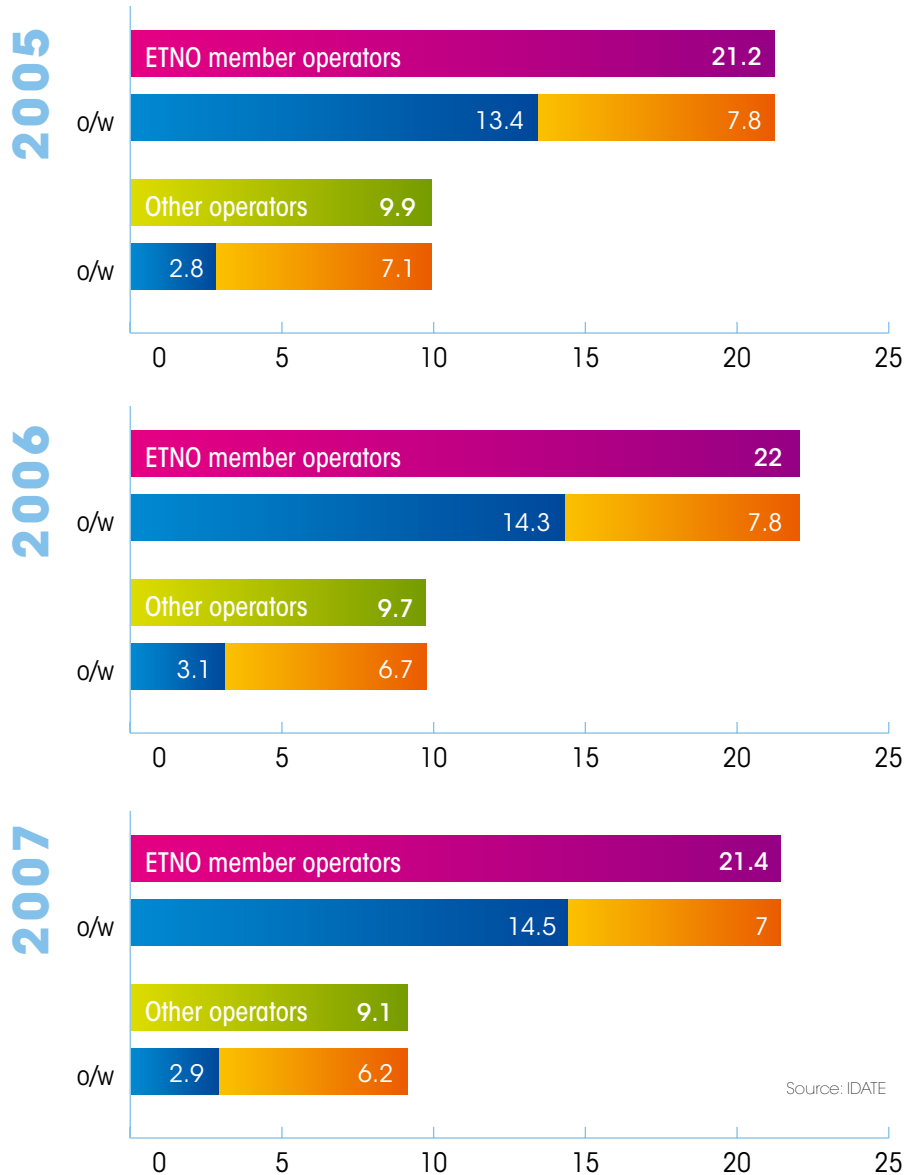
Companies are also increasing capacity and coverage of mobile broadband networks by upgrading to HSDPA (**Deutsche Telekom**, **TDC**) or 3.5G/HSUPA (**Telefónica**). **TeliaSonera** is rolling out 3G mobile networks in all Scandinavian and Baltic countries.

Fixed telephony 
Mobile services 

Telcos' investment (ETNO perimeter) | billion €



Telcos' investment (5 main European markets) | billion €



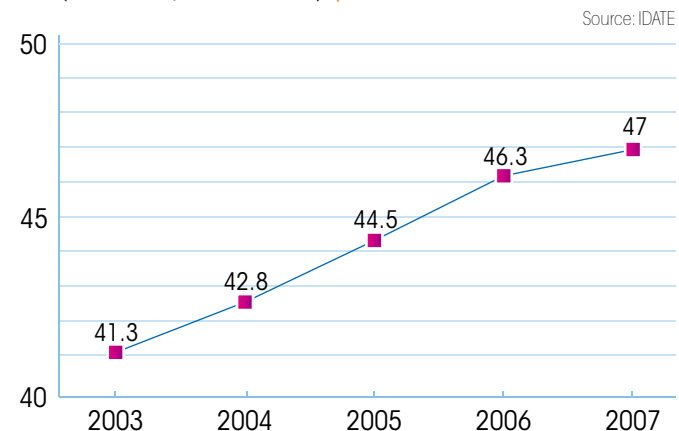
Universal service

In many countries, ETNO members have been designated as the supplier of the Universal Service obligations as laid down by the EU Universal Service Directive. The universal service includes among others the provision of fixed access; directory enquiry services; public payphones; special services and equipments for disabled users. Obligations vary from one country to another depending on market, social and geographical circumstances.

The cost of provision as well as the financing mechanisms equally differ from one member state to another, from 70 up to 400 million € in EU 15 countries and up to 800 million € in new member states. The main investment is linked to the provision of a fixed line to every household. This cost can be particularly significant in new member states where the average access infrastructure penetration is lower. The second largest cost linked to the universal service is the operation and maintenance of public payphones, which can amount up to 30 million € for one country.

Evolution of investments (entire sector)

Telcos' consolidated tangible CAPEX in Europe (incl. Turkey, excl. Russia) | billion €



4.2 INVESTMENT IN RESEARCH AND DEVELOPMENT AND LAUNCH OF NEW PRODUCTS

Innovation in the telecoms sectors unfolds at a very dynamic pace following the main trends of the evolution of society. Seamless access to broadband continues to drive product and service innovation, with more and more consumer demand for broadband access over mobile and wireless networks.

Mobile and wireless broadband networks represent a solution to increase the coverage of broadband and bridge the digital divide. New e-communications services also continue to focus on innovative means of delivering and using legitimate content.

With the web 2.0 revolution, more and more services aim at enabling users to take a central role and use Internet in an interactive way. ETNO members are also taking the lead by developing interactive web 2.0 applications, community web sites, content sharing or social networking platforms.



Wireless Broadband access

- **Belgacom** offers mobile internet packages using Proximus' 3G Broadband networks with a speed of up to 3.6 Mbit/s, and covering up to 85% of the population.
- **Deutsche Telekom** T Mobile's web'n'walk is already used by more than two million customers in Germany to access internet via a mobile phone. The customisable web'n'walk homepage allows customers to directly access services such as Amazon.de, eBay, Google, Windows Live Hotmail and Yahoo!.
- **Elion** in Estonia offers wireless access through approximately 400 access points in cities as well as in rural areas. Additionally to this Elion installed about 160 WiMAX base stations to cover areas where copper (DSL) access is impossible.
- **France Telecom**'s updated Livebox provides broadband access for up to four computers via WiFi, unlimited calls through VoIP, IP TV with a set top box, Unik (fixed/mobile phone) and other services including Liveradio. France Telecom's Flybox is a Livebox that uses the mobile network to offer broadband and voice services to customers, especially in areas without access to landlines or DSL.
- **Lattelecom** has made available more than 450 WiFi Internet access points at the end of 2007 in Riga and Latvia's largest cities. About 50 points are made available through payphone booths equipped with WiFi Internet public access. Lattelecom also installed WiMAX wireless Internet facilities in and around the capital Riga and four base stations in other regions.
- Users of **Magyar Telekom**'s HotSpot service can access broadband in public sites (hotels, restaurants, cafés) using the WiFi technology. Magyar Telekom also provides mobile broadband access through its 3G/HSDPA broadband network available in more and more cities.
- **OTE**'s new WiFi Hotspots provides a series of flexible means of credit control and wireless access to the Internet including tailored services for designing, equipment provisioning and installation of a wireless local area network in the premises of customers such as hotels.
- **P&T Luxembourg**'s mobile subsidiary, LUXGSM, launched five wireless broadband solutions for up to 3.6 Mbit/s with unlimited time duration.
- **Portugal Telecom**'s Sapó Móvel offer provides mobile broadband to residential users. PT's internetnotemóvel is an Internet and e-mail flat-rate offer for broadband access through mobile terminals. As part of a Government's technological plan, PT developed a special offer for laptops with wireless broadband access for teachers, students, and "info-excluded" citizens. Portugal Telecom's Office Box is a fixed and mobile convergent service, conceived mainly for SMEs. It comprises a complete package of voice, data services and equipment.
- **Swisscom** launched a mobile internet service offering up to 7.2 Mbit/s with different packages to various usages. Swisscom also launched its mobile Bluewin TV service in high definition quality over a DVB-H network. The service is currently covering 44% of Switzerland.
- **Telefónica** started to roll out HSPA (high-speed packet access) mobile internet access which extends and complements the 3G mobile technology in Spain, allowing mobile internet users to download information up to ten times faster. In the UK, Telefónica O₂ launched a USB Modem service and in Ireland, the O₂ mobile broadband offer. In Germany, Telefónica launched a USB Modem and Internet Pack aimed at combined handset and laptop usage.



Content-based services

- **Telekom Austria's** Mobilkom started developing mobile TV services based on DVB-H technology. Mobilkom Austria was the first operator to launch HSUPA in Austria.
- Early 2008, **Telekom Slovenije** launched its commercial WiMax wireless broadband network, to cover up to 40-percent of the population by end 2008. The network is first being deployed in the regions currently not covered by fixed broadband networks. The network will ultimately cover 98.4 percent of the population.
- In 2007, **Telenor** has developed a Wimax wireless broadband network in Norway. It also provides HSPA mobile broadband access in Norway, Sweden and Hungary.
- **TeliaSonera** launched its Home Free service, a mobile IP telephony offering.
- **Telekomunikacja Polska** offers wireless access to fixed internet and provides VoIP telephony for residential and business users.
- **TEO** offers wireless Internet access at cafes, restaurants, petrol stations, TEO customer care centres, in some municipalities, hotels, streets, squares, shopping centres and increased the number of wireless Internet (WiFi) hot-spots up to 3,800. The company also offers Internet telephony.
- **Belgacom** offers IPTV since 2005, branded 'Belgacom TV'. Besides more than 80 channels, the offer includes two bouquets, a dedicated football channel (branded 'Belgacom 11') as well as a growing VoD catalogue. The proposal also includes recording, pause and programming functionalities. Recently, the content portfolio has being enriched with HD channels and content. Interactive tools are also available for broadcasters (eg voting). Belgacom launched mobile TV in 2005 together with additional 3G services. The service gives access to 30 channels as well as VoD, via the mobile portal or since recently, via an application to be downloaded on the mobile phone. Belgacom is increasingly exploiting its content on its IPTV/mobile and web platforms.
- **Croatian Telecom** launched its self installation IPTV offer, MaxTV.
- **Deutsche Telekom** launched "Entertain" IPTV, a high definition TV Service including online Video on Demand on the basis of VDSL and ADSL2+ networks.
- **Elion** launched Video on Demand (VoD) service for its IPTV clients in May 2007. The service has no monthly or subscription fee and videos can be rented for a one-time fee. 60% of Elion's digital TV clients have used VoD and 15% are heavy users. Elion was chosen as the winner in the Innovator 2007 category of the enterprise competition organized by Enterprise Estonia for its VoD service. Elion also launched a digital music sales environment.



- **France Telecom** is developing the Orange Cinema Series offer, consisting of six premium channels of films and TV series. The offer is available to customers by subscription on all platforms (TV, Internet and mobile) and content can be downloaded and transferred onto mobile devices. Orange also made a number of agreements with studios to make films available to Orange customers through TV, Internet and Mobile platforms. As official sponsor of the Rugby World Cup 2007, Orange makes content available on Orange mobile phones and on Orange Sports, a new Orange TV channel. Orange customers can also follow Football Ligue 1 on their mobile, TV or PC with interactivity options such as access to match statistics as they watch or a goal text message.
- **Lattelecom** launched its Lattelecom TV package, a digital TV offer providing access to more than 50 channels, recording and pause systems, programming and security functions. Lattelecom TV also includes a video on demand catalogue.
- **Magyar Telekom** is launching a mobile TV service.
- **OTE's** newly launched Conn-X View service enables the customer to directly access the content of his/her security camera(s) through a computer and/or a mobile phone (GPRS-UMTS) with Internet access. Furthermore, in case of movement detection in the area covered by the alarm system, the customer can receive an alert to his/her e-mail or by SMS. "School powered by conn-x" is an innovative interactive e-learning service. It is a secure way for children to experience broadband services. Using ADSL access, every pupil has the possibility to enter the virtual school, create a virtual profile and attend video lessons and solve tests.

- **Portugal Telecom's** MEO 3play offer includes IPTV, fixed voice (unlimited traffic for PT fixed network) and broadband internet (unlimited national and international traffic). MEO's entry level package (Meo BASE) includes 45 channels (35 "fixed" channels, plus two thematic packs out of six packs with five channels each), including some channels in High Definition, access to a Video on Demand service with over 1.300 titles and a PVR with recording, pause live-TV and time-shifting functionalities. MEO also offers an extended TV package (Meo MIX) and over 20 Premium channels (Sports, Movies and Entertainment), some of which are "MEO exclusive". PT also offers DTH (Direct to the Home) service since April 2008 comprising 65 channels and a mobile TV offer with 31 channels under MEO brand.
- **P&T Luxembourg** offers IPTV since March 2008 comprising 85 channels in the basic package. The service will be extended to pay TV packages and Video on Demand. LUXGSM also offers mobile TV.
- **Slovak Telekom** provides Internet Content Services via Zoznam.sk through which users can access services such as the Bleskovky.sk news server and other specialised magazines, freemail service, and internet shop. Another important part of the Zoznam.sk service portfolio is the catalogue of companies, giving even small companies the chance to present themselves and their contact information on the internet in a professional way.
- **Swisscom's** Bluewin IP TV offer also includes a Video on Demand catalogue and access to Sports Channels.





- **Telefónica** in Spain expanded its imagenio IPTV offering with a video service 'You missed it' which allows customers to see content broadcast on different TV channels and to pause or fast-forward programmes. Telefónica also launched Smartbox, a pay per view access to Imagenio. In Spain, Telefónica also launched a mobile version of Pixbox allowing Movistar users to choose from more than 750,000 songs to download. Telefónica O₂ also developed new IP TV and online content offerings in the UK, Ireland, Germany and the Czech Republic.
- **Telekom Austria's** aon TV package features more than 60 TV channels and its coverage was extended to include all district capitals in addition to Vienna and the provincial capitals. By the end of 2007, 20,900 customers had subscribed to the service. Moreover, aonTV is also offering video-on-demand with a catalogue of current blockbusters, popular television series and classic films. aonAlarmServices is an alarm system that connects the property to the aon security center over a fixed access line.
- **Telekom Slovenije** is providing both IP and Cable television offers through fibre to the home connections. The IP TV offer, SiOL TV, offers a large selection of Slovenian and foreign TV channels, video on demand, personal recorder, electronic TV guide and games. SiOL TV also includes security settings allowing to lock inappropriate TV and video contents. Telekom Slovenije has also developed a business directory service.
- In 2008, **TDC** launched Play, its new music service offering unlimited access to music downloads to Danish mobile and broadband customers, without additional charge. Play offers music from major Danish and international music companies. The total PLAY offering covers at present about 70 per cent of the current music on the Danish market.
- **TeliaSonera** broadened its IP-TV offer and launched Triple Play packages in several countries where it operates. TeliaSonera launched e-banking in Lithuania and mobile tickets on public transportation in Sweden
- **TEO's** content offer includes interactive games, a virtual film rental service (VOD – Video On Demand) and TV programme recording service. TEO also provides digital terrestrial television (DVB-T).
- **Telenor** launched several mobile payment and banking services such as in Bangladesh, Grameenphone's BillPay mPayment service, an electronic bill payment system for utilities services and for other companies, eLoad mPayment in Pakistan, ATM SIM mBanking in Thailand and DigiRemit mPayment in Malaysia. Telenor also launched its LifeCare mobile life insurance solution in Thailand. In Hungary, Telenor's Pannon customers can buy movie tickets, place ads or pay for public transport through their mobile. Telenor received the MEF (Mobile Entertainment Forum) Award 2007 for its wide offer of mobile entertainment services on the Norwegian market.
- **Telekomunikacja Polska** has a wide offer of content-based services including Video on Demand service, Videostrada and an IP VPN networks. TPSA also launched a triple play offer.
- **Turk Telekom** launched a videophone service enabling its customers to make a video call over a fixed line. The service also features additional functionalities such as voice and video messaging, personalised ring tones and groupings. Turk Telekom is also planning to launch an IPTV offer, to be completed with a Video on Demand catalogue.

Web 2.0 applications

- In December 2007, **Elion** introduced a new service called PictureAlbum, which allows the users to load their photos onto the web and exchange them with friends through their TVs.
- **France Telecom**'s Soundtribes is an internet service launched in September 2007 that aims to help bands manage their relationship with their audience and for fans to discover original music, make new friends that share the same passion and get involved in their favourite artist's network. Pikeo is a photo sharing online community launched in December 2006. It provides advance sharing capabilities, geotagging, mobile photo upload and soon printing. Bubbletop is a social internet homepage for content sharing.
- **Magyar Telekom** launched its video sharing platform called Videa. It also developed the 197.hu online map and location service allowing users to look for addresses and locations of all kinds of institutions, companies, services (e.g. restaurants) in a certain area or even tourist attractions. The application also enables users to give an opinion or classify the service they found through 197.hu.
- Through its Sapo portal, **Portugal Telecom** has developed the Blogs Sapo and a social networking site, Sapo Spot, enabling users to create their own network and share photos, videos and blogs.
- **Telefónica** is developing a social network aggregator called SocialUna that will allow its users to see in one single site their activity in different social networks. Kazivu let's users create video channels and interact with friends in their networks. Litmus is a co-creation developer's and tester's community site for 3rd party development and monetization of applications that use Open APIs provided by O₂ telecommunications network. I-CUE is an open platform that lets developers create widgets that will operate seamlessly on wireless phones, PC, or even TVs. Sofá Virtual enables groups of friends interact with each other via chat

and video conference. Finally, Hybrid Worlds allow fans enter virtual worlds of their favourite shows, interact with their main characters, and influence future episodes.

- **Telefónica O₂ Czech Republic** launched in 2008 a new community portal, Ochutney.cz, which enables users to share holiday pictures, videos and demo-versions from their own music band. Content can be uploaded from a PC and shortly from a mobile phone.
- **Telekomunikacja Polska** launched in 2006 the Virtual Museum Programme. The first institution whose collection will be available via Internet will be the Warsaw Uprising Museum
- **TeliaSonera**'s Surfopen allows mobile users to surf the web. It is part of TeliaSonera's pan Nordic and Baltic mobile Internet portal, Surfport. It enables customers to play interactive games, read the news, listen to music, watch the sports and check train schedule all on their mobile phones. SurfPort partners with international and local media to deliver top notch entertainment, news, music, video clips, search engines, maps, games and more.
- **Telecom Italia** has launched Yalp!, a "Community TV" on the Internet which offers navigators the possibility of creating, publishing and sharing their own television channel from a catalogue of professional video content and self-made content. The personal television channels which obtain the most votes from the Community will be published in Yalp!'s "TV" section alongside with the major broadcasters. Yalp! also gives free access to some of the major national radio stations, main national and international television channels and to a collection musical tracks and albums.
- **Telenor** has launched IP TV offerings in Norway and Sweden and Web TV services in Norway.



ETNO members in the world

NORTH AND SOUTH AMERICA	
1	USA
2	Canada
3	Mexico
4	Guatemala
5	Honduras
6	El Salvador
7	Nicaragua
8	Panamá
9	Dominican Rep.
10	Puerto Rico
11	Colombia
12	Venezuela
13	Ecuador
14	Peru
15	Brazil
16	Bolivia
17	Chile
18	Argentina
19	Uruguay

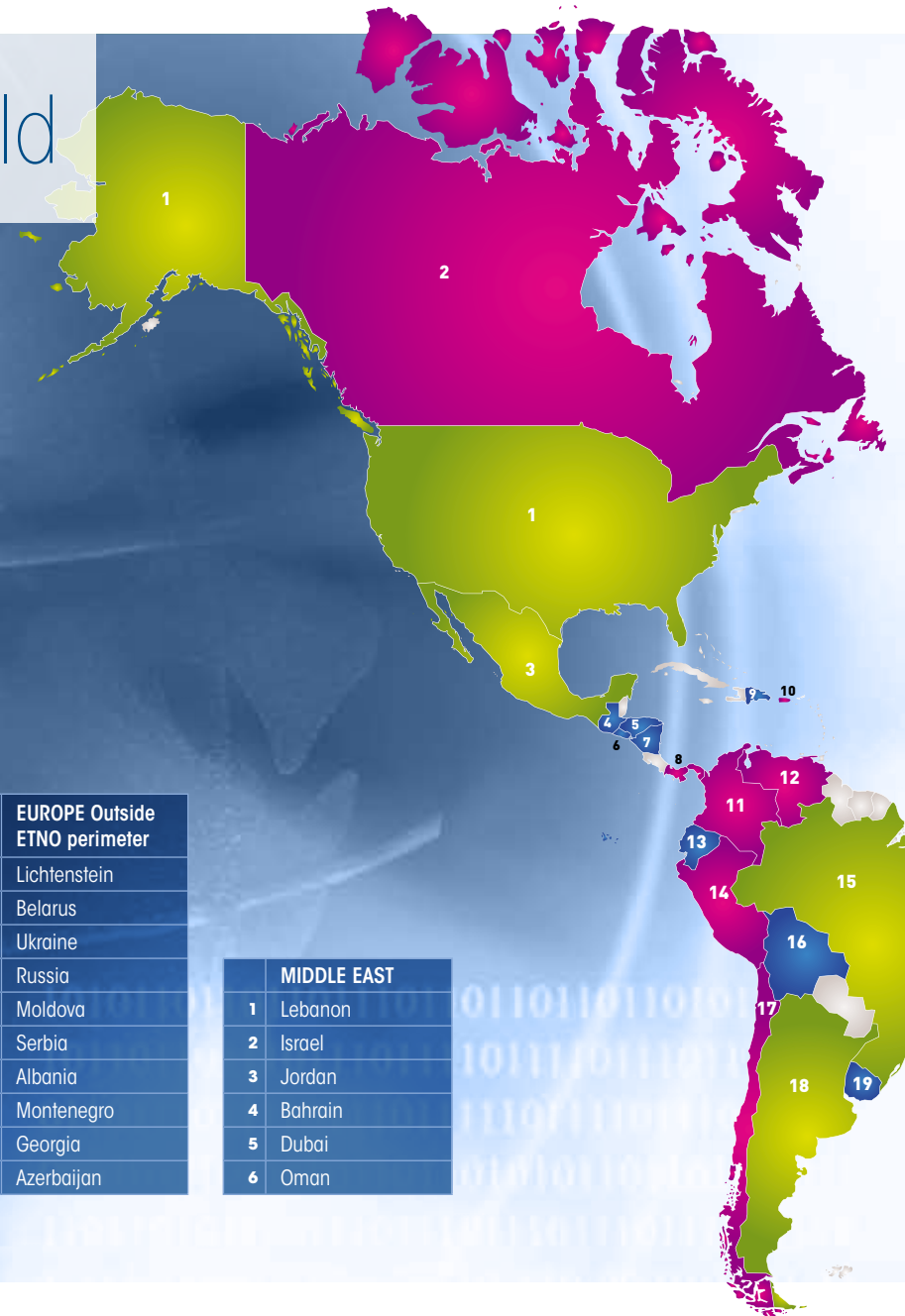
OCEANIA	
1	Australia
2	Vanuatu

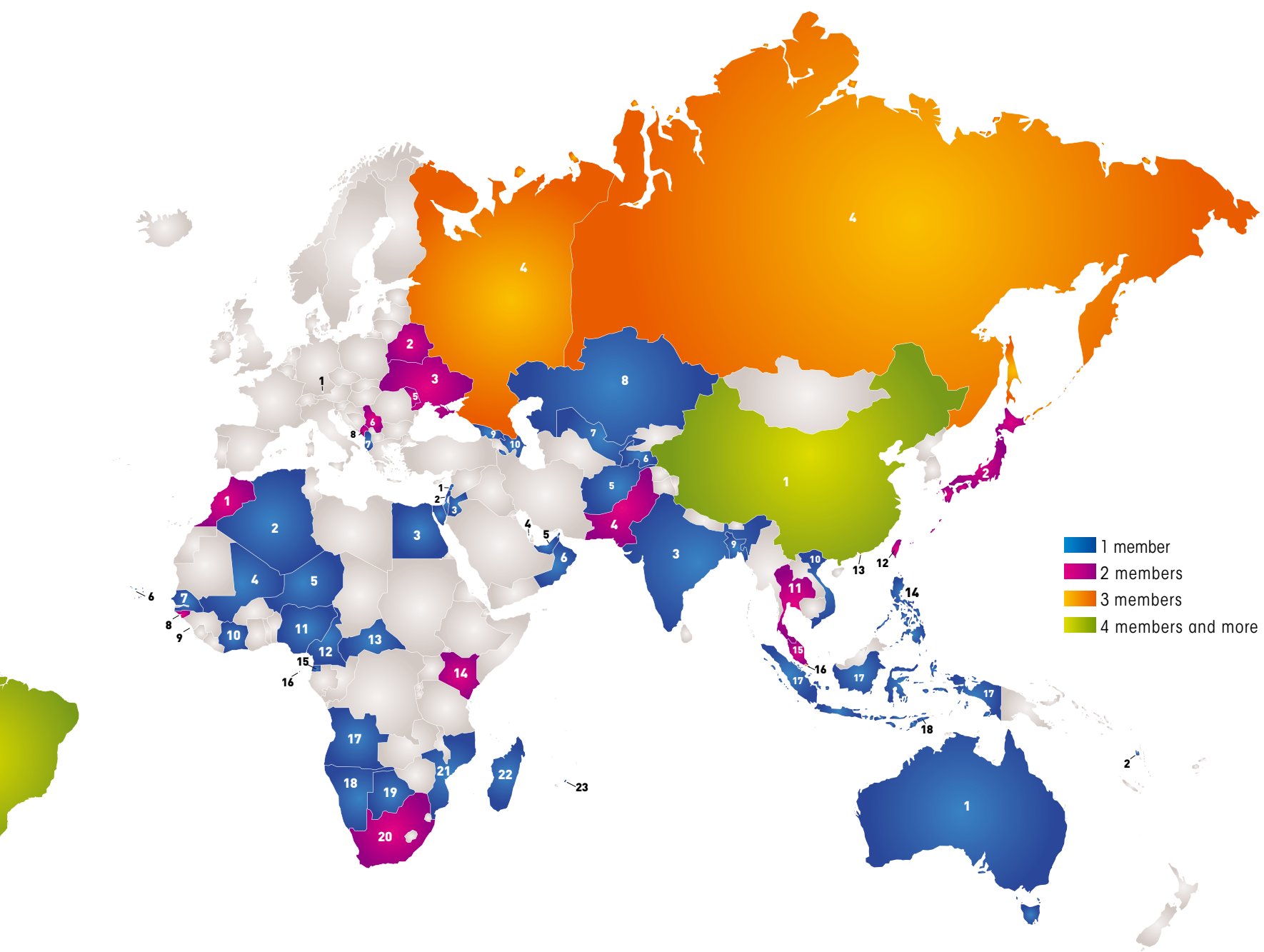
AFRICA	
1	Morocco
2	Algeria
3	Egypt
4	Mali
5	Niger
6	Cape Verde
7	Senegal
8	Guinea Bissau
9	Guinea Conakry
10	Ivory Coast
11	Nigeria
12	Cameroon
13	Central African Rep.
14	Kenya
15	Equatorial Guinea
16	S.Tome & Principe
17	Angola
18	Namibia
19	Botswana
20	South Africa
21	Mozambique
22	Madagascar
23	Mauritius

ASIA	
1	China
2	Japan
3	India
4	Pakistan
5	Afghanistan
6	Tajikistan
7	Uzbekistan
8	Kazakhstan
9	Bangladesh
10	Vietnam
11	Thailand
12	Taiwan
13	Hong Kong
14	Philippines
15	Malaysia
16	Singapore
17	Indonesia
18	East Timor

EUROPE Outside ETNO perimeter	
1	Lichtenstein
2	Belarus
3	Ukraine
4	Russia
5	Moldova
6	Serbia
7	Albania
8	Montenegro
9	Georgia
10	Azerbaijan

MIDDLE EAST	
1	Lebanon
2	Israel
3	Jordan
4	Bahrain
5	Dubai
6	Oman





This map illustrates the presence of ETNO members outside the perimeter covered by ETNO membership. (non-exhaustive list)



The eCommunications society is a reality...

We drive it !

- In line with the objectives of the European Commission i2010 initiative, ETNO members directly contribute to a more sustainable and inclusive information society by launching services and programmes aiming at increasing digital literacy, improving healthcare, giving assistance to elderly people or disabled users. ETNO members are also directly addressing the climate change challenge by developing services that reduce CO₂ emissions or by reducing their own environmental footprint.

6.1 DIGITAL LITERACY

- **Deutsche Telekom** pays particular attention to the integration of new media into everyday life. DT's programme Telekom@School provides schools with free infrastructure, while "Schools online" concentrates on providing and distributing content. Through its "X online" initiative, Deutsche Telekom offers Internet training courses for selected groups of individuals, such as the elderly.
- In France, **France Telecom/ Orange** developed Point Visio-Public – an interactive communication tool bringing citizens and public services together in a secure and user-friendly environment. In 2007, the programme was awarded 1st prize from the European Commission. In Poland, Orange launched the Internet Republic project, aiming at reducing the digital divide by encouraging internet use in education, development and tourism in Poland's poorest rural areas.
- **Magyar Telekom** supports Internet training programmes, including free ICT education for elderly people. Magyar Telekom also launched a program called 'With Internet for Equal Opportunities (Egalnet)', aiming at bringing together organisations dealing with disadvantaged groups such as small localities, minority communities, associations of unemployed people, pensioners' communities, ...
- **OTE** provides packages for targeted groups including Students' Scheme designed for public University and Technological Education Institution students. OTE also provides free fast internet to all candidates to enter each University or Technological Education Institute (TEI) Department.



- **Portugal Telecom's** Internet Bus "Internet reaches you" is a travelling classroom whose function is to provide basic training in new technologies mainly in the most underdeveloped areas of the country. In 2006, 25 municipalities and 140 communities all over the country were visited. 4,500 individuals participated in the training actions. PT Escolas (PT Schools) aims at raising awareness about the opportunities offered of Internet for the school community. Portugal Telecom also developed special programmes such as "a computer, an opportunity", "Escolas do Futuro", "Oficinas do conhecimento", "e-Escola", to enable the acquisition of computers with broadband access at exceptional commercial conditions. The PT Foundation is one of the signatories of the Net Timor Protocol which aims at promoting the development of the Information and Knowledge Society in Timor. The project foresees the supply of Internet access and its use in schools and teachers' training centres.



- **Slovak Telekom** has been supporting the digitalisation of the society since 2002 when the company initiated the eSlovakia programme, in cooperation with the Slovak government. The largest project was called "PCs for Schools", bringing computer classrooms with Internet access to elementary and secondary schools in Slovakia, followed by several initiatives such as eTablo, eCasopis and Pupil Record Book targeted at students of elementary and secondary schools. These projects aimed at motivating students to actively use Internet and create interesting content. In 2007, Slovak Telekom launched the second edition of Slovak Telekom Award, aimed at teachers of elementary, secondary schools and special education who use ICT in their teaching. Slovak Telekom also provided free-of-charge Internet access for 41 mothers' centres throughout Slovakia and helped them organise training courses on the use of Internet. Slovak Telekom also continued to donate used information technology equipment to institutions within education system, state healthcare and non-governmental sector.
- **Swisscom** has been connecting primary and secondary schools in Switzerland to the Internet since 2001 within the framework of a federal initiative entitled "Public Private Partnership - Schools on the Net" (PPP-SiN). The PPP-SiN federal initiative was completed in 2007 and Swisscom reached its infrastructure objective: It connected over 5000 Swiss schools to the Internet for free. This offer will be kept in place and expanded by two new programmes: "School Service" and "SchoolNet" are additional services offered by Swisscom to students, teachers and parents.
- **TDC** participates in several government and industry campaigns aimed at the elderly and children on diverse subjects such as net security and mobile etiquette.
- **Telecom Italia** launched its "Anti digital divide plan" in 2006, aiming at expanding the ADSL coverage. End 2007, the "Agreement memorandum" signed between the Ministry of Communications, Infratel Italia and Telecom Italia aims at reducing, and hence eliminating, the digital divide, favouring the development of broadband structures over the whole national territory. In order to spread the ICT culture, Telecom Italia has created a "Future centre" where some of the most innovative technologies can be experienced and meetings on new technologies and their social and environmental impacts are held.
- In the various countries where it is present, **Telefónica** is involved in various programmes to bring broadband to all and increase digital literacy. In Spain, Telefónica, jointly with the central government, is involved in bringing broadband to remote rural areas. In cooperation with regional authorities, it provides broadband connections for students in all schools. Telefónica Foundation's EducaRed programme is organising free classes to teach people how to use new technologies. Its Innovative Teachers portal helps teachers in Spain and Mexico to make new technologies part of their teaching. Telefónica O2 took part in the UK Government's Digital Inclusive Panel which contributed to the UK Digital Strategy and became a signatory to the Media Literacy Charter, which aims at providing citizens with the creative and critical skills they require to get the most out of modern media content. In Ireland, O₂ is involved in a joint telecommunications industry and government initiative to bring broadband to all schools. Telefónica's Proniño Programme is designed to give school access for children to avoid child labour in less developed countries. Telefónica is also launching a worldwide awareness campaign on the responsible use of ICT by its customers, focusing on safety, child protection, recycling, data and copyright protection.

- **Telekom Austria** initiated the Web 2.0 Class project, in cooperation with the Ministry of Education, Art and Culture and the saferinternet.at initiative. Through this project, students from several schools studied the nearest national park and placed their results online in the form of project reports, images, podcasts and videos. The Telekom Austria Group joined forces with educators and interest groups in initiatives such as Saferinternet.at, Handywissen.at, ROUNDABOUT KIDS or the mobile phone guide to promote a responsible use of new media and communications technologies. Furthermore, in 2007 Mobilkom Austria, Mobiltel in Bulgaria and Si.mobil in Slovenia signed the European Framework on Safer Mobile Use by Younger Teenagers and Children initiated by the European Union.
- **Telenor** is involved in a number of projects throughout the countries where it operates to promote digital literacy and connectivity. In Bangladesh, Telenor's subsidiary Grameenphone brings mobile communications to a wider audience through 500 Community Information Centers offering high speed Internet access to people in rural areas. Telenor Pakistan launched Telenor Rabta Centres to offer high speed Internet access to people in rural areas of Pakistan, including basic services such as e-mailing, video-conferencing, scanning, ... Telenor Pakistan has also launched a community project, apnaPCO, which aims at bringing access to the most disadvantaged rural communities in the country. In 2008, Telenor signed a new agreement with the Norwegian humanitarian organisation FAIR to ensure that used IT equipment is at the disposal of schools in developing countries. Telenor developed a partnership with SAFT (Safety, Awareness, Facts and Tools), a European project aimed at increasing awareness on the safe use of online technologies and mobile phones for children and teenagers. Finally, the Telenor Serbia Foundation supports higher ICT education.

- Since 2004, **Telekomunikacja Polska** through its "Education with TP Internet" programme provides schools of all levels with discounted Internet access and training of teachers. The TP Group Foundation is also a major partner of the national campaign "Dziecko w sieci" ("Child in the Web"), carried out in co-operation with the Ministry of Education. The "Internet Smile" Programme of TP creates Internet mini-laboratories helping hospitalised children to pursue their education. In 2007, TPSA initiated a co-operation with 10 out of 16 Polish regions to roll out Internet access to remote areas of the country over the next seven years under Public-Private Partnerships schemes.
- By the end of 2008, **Turk Telekom**, will make 885 Internet Houses operational throughout Turkey, to provide free Internet access to the public and improve digital literacy in the country. TNet, Turk Telekom's Internet service provider, aims to raise awareness about computer-based tools through TNet Vitamin competition. In addition, under a joint project with the Ministry of Education, TNet will provide free e-mail addresses to approximately 2.5 million Grade 4 and 5 primary school students.





6.2 E-HEALTH

- **France Telecom/ Orange** launched in 2008 a series of new medical solutions in France, such as the Connected Emergency Response – an information system that connects ambulance, hospital and local co-ordinators. The application provides automated navigation through patients medical records, transmits the medical diagnosis to hospital and manages the ambulatory pharmacy to ensure that needed supplies are ready. Orange's Connected Hospital At Home solution provides carers with up to date medical records in real-time, guaranteeing full co-ordination between medical carers at home. Orange's Click to Book solution is an integrated web-based appointment booking service.
- **Magyar Telekom** is developing a health advisory service which combines an insurance and a non-stop health advisory service through which all kinds of medical questions can be answered, including legal questions related to health problems. A panic button is also included in the package enabling the customer to request help in case of an acute health problem.
- **OTE's** telematics health services via videoconference enable medical staff to exchange opinions about a medical situation over long distance. It also opens up new possibilities for continued education or training of practitioners in isolated or rural areas. OTE also offers a four-digit number "1535" on a national level, allowing users to make an appointment in public hospitals through sophisticated voice recognition technology. The cost of the call is local charge throughout Greece.
- **P&T Luxembourg** has been engaged for several years in a national program called HealthNet which allows medical practitioners to access patient files wherever they are in the country.

- **Portugal Telecom**'s Medigraf – a diagnosis platform using UMTS access developed by PT Inovação – allows distance medicine. The platform is also used as an instrument for training doctors and other health professionals. The access to the platform with a PC via UMTS connection allows total mobility.
- **TDC** has developed the “School on a Screen” programme, which enables children committed to hospital for a longer period of time to follow classes via webcam and interactive blackboards. The TDC's CARE solution enables home health workers to access patient journals online while mobile.
- **Telefónica** is involved in trials to develop mobile phone applications to manage health conditions, such as asthma, diabetes and cystic fibrosis. By recording the patients' symptoms and peak flow, the service aims to reduce the number of asthma attacks through increased self-monitoring. Results showed extensive benefits as patients monitored their breathing more regularly than with conventional methods; doctors were alerted in case of need; patients were provided with regular reminders, via text, to take their readings. The cystic fibrosis trials were designed to reduce the number of patient visits to the hospital, allowing a timely intervention when needed. The programme was extended in 2006 to sufferers of chronic obstructive pulmonary disease (COPD) and some work with the British Lung Foundation. More recently, in the UK, O₂ has worked in partnership with an e-health company called e-San, on a method of recording patients' health and sending regular updates on their conditions to doctors.
- **Telefónica O₂ Czech Republic** provides a secure and robust platform for sharing essential information, such as data about a patient's health, and for carrying out processes with heavy data demands like video transmissions of surgical procedures.
- As the largest operator of e-card network infrastructure **Telekom Austria** connected roughly 9,000 doctors' offices with the e-card applications computer of the Austrian confederation of social security providers (HVB - Hauptverband der österreichischen Sozialversicherungsträger) and provides broadband infrastructure throughout Austria.
- **Telenor** has been selected to develop the ICT infrastructure of the new St Olav Hospital in Trondheim and of the Ahus Hospital in Oslo, aiming at setting up totally digital hospitals. Telenor's subsidiary in Bangladesh Grameenphone has won the GSMA Global Mobile Award for its HealthLine, a 24-hour call centre manned by registered physicians. The service is accessible to all Grameenphone subscribers and registered callers receive medical assistance directly over the phone (medical files are retained at the call centres). Telenor's subsidiary in Thailand, DTAC, teamed up with community radio Ruam Duay Chuay Kan to provide an emergency hotline service to the public.
- **TeliaSonera** is developing products and services to improve access to and quality of healthcare services. Notification is a service which uses mobile phones to monitor patient care. Medical staff can log the beginning and end of medical treatment using a mobile phone to read patients' medical information and keep relatives informed. The Medical Compact Center service allows patient medical information to be sent to a doctor electronically, and for patient and doctors to communicate via video link. The Medical Treatment Terminal installed in hospital rooms allows patients to make phone calls, surf the Internet and watch television and acts as a medical information centre, where doctors can update the patient journal. The Emergency-call service allows people to contact security personnel and give their location at the touch of a button. The Distance Monitoring application monitors a patient's heart and warns the patient, relatives and medical staff when for example the heart rate becomes irregular.

6.3 SERVICES FOR DISABLED USERS



- **BT** offers a wide range of communications solutions and tools for people with hearing, speech and sight impairment, like BT TextDirect and BT Sign. Accessibility is also considered in product design with features specifically for people with disabilities, including ring indicators, large buttons and hearing aid compatibility. In 2007, a new Centre of Excellence for Inclusive Design has been set-up.
- **Croatian Telecom** makes available payphones especially adapted to the needs of disabled users.
- **Deutsche Telekom** is offering services for the hearing impaired.
- **Eircom** offers handsets adapted to people with special needs. All handsets provided by eircom are adapted to people with restricted vision. The eircom dB30 phone has large push buttons that can be seen more clearly and a flashing indicator to signify that the phone is ringing. For hard of hearing customers, eircom phones have a built-in inductive coupler fitted into the earpiece, enabling the caller to hear incoming speech clearly.
- **Magyar Telekom** makes available public phone boxes that are also accessible to disabled users.
- **OTE** has set up a special Telephone Line 18855, addressing people with hearing problems. OTE also provides special handsets for people with hearing problems and textphones, which include a keypad and a small screen. Since 2000, OTE installed 19000 public card payphones, which are also accessible to disabled people and made available a series of discount schemes on telephone bills that apply to disabled users

- **Portugal Telecom** is involved in a series of accessibility projects such as the Star Project, aimed at people with a neural-motor disability and the Uranus Project which foresees the installation of educative and training resource centres for people carrying mental disability. Portugal Telecom's TeleAula facility allows children with severe health problems or disabilities to attend school from distance. PT Grid 2 allows people with limited speech to use a PC as a communication aid, using symbols or text. Through the Casa (House) Project, Portugal Telecom is involved in the construction of a multifunction space, dedicated to the area of motor disability, enabling experimentation, demonstration and training in the area of the technologies of augmentative communication and accessibility. Portugal Telecom also provides services to people with hearing or speech problems. Portugal Telecom also disposes of services oriented to persons with visual deficiencies, such as PT Voz Activa - a voice solution integrated on a screen reader which allows access to Internet and Windows environment. Finally PT makes its invoices and correspondence available in Braille.
- **Swisscom** developed special services for disabled users such as directory services for blind people or connectivity services for people with hearing impairments.
- **TDC** offers special services for the hearingly impaired to use a text-phone service.
- **Telecom Italia** is developing new services in order to provide telecommunications services also to people with special needs, in close cooperation with the relevant associations of people with disabilities. A software called "Talks", which allows visually impaired people to use the mobile phone thanks to a technology reading information on the display, received a special mention in the "Sodalitas" Award.
- In the UK, **Telefónica O₂** provides extensive information for customers with disabilities through its Access for All website. It offers invoicing in Braille, large font and audio options. Customer-care letters have been revised by reducing their length, writing them in simpler English and bulleting information where possible. Telefónica O₂ belongs to the Employers Forum for the Disabled and the Two Ticks scheme which raises disability awareness among employers. The company also undertakes stakeholder engagement with NGOs representing disabled groups to better understand customer needs. In Ireland, O₂ has collaborated with other mobile operators to produce a guide for choosing a mobile phone. Internally, Telefónica O₂ Ireland has raised awareness of dyslexia, providing managers with guidelines on communications, showing employees how to view web pages in larger font sizes and making internal communications more accessible. In the Czech Republic, O₂ offers discounts on fixed-line and mobile services for disabled people.
- In cooperation with the Austrian Blind Union (ÖBSV), **Telekom Austria** developed the barrier-free website www.derdurchblick.at and equipped all seven ÖBSV regional organisations with ADSL broadband access lines.
- **Telenor** launched in Norway Telenor OpenMind, a two-year educational and work-training programme for people with physical disabilities, reduced mobility or hearing and visual impairments. A similar programme has been introduced in Malaysia in 2008. Telenor also developed a text solution for people with hearing impairments.
- **Turk Telekom** developed an invoice data system adapted to the needs of visually-impaired people, using a special embossed calligraphy technique. Invoices with data in Braille alphabet are sent together with the original in specially designed envelopes.

6.4 ASSISTANCE TO ELDERLY

→ As part of its commitment to provide services adapted to the needs of elderly people, **BT**, together with the 'AGE Concern' association, produced a guide for elderly users on how to get connected to the Internet.

→ **France Telecom/ Orange** launched in 2008 several new applications to enable elderly people to continue living independently. Orange's mobile Téléassistance provides a handset with geolocation capabilities allowing vulnerable people (elderly, ill or isolated for example) to receive assistance (medical or everyday such as taxi) at the touch of a button. Orange also developed a Health Monitor application which allows elderly and others people suffering from chronic illness to remain at home. This 'disease management' tool improves communication between patient and healthcare professionals, enabling them to enter in contact with a health team at any time, reminding them to take medication or about a medical appointment. The services are provided through the most suitable device – phone, pc, touch screen etc.

→ **OTE** developed a special tariff package for retired people. OTEALERT offers a special 24-hour service for people who may need to call for help in an emergency or require help and constant care. The service also meets specific customer needs, by providing them with protection and security at their place of work.

→ **Portugal Telecom** is offering special prices for retired people and cooperates with the Third Age University network by providing them with PCs and Internet access. Recrear (Recreate) Project in partnership with the Association for the Development of New Initiatives for Life (ADVITA), aims at making the Second Life community accessible to elderly people. PT Emergency provides remote support at home to persons at risk. It is composed of a fixed telephone base and a sensor that allows the automatic activation of an alarm call to 5 pre-defined numbers. Portugal Telecom operates a terminal with a 24h connection to the Portuguese Red Cross, TeleAlarm. Green # is a number dedicated to people with special needs and elderly people (to register requests, to give advice on services and products, etc). Portugal Telecom's Aladim program offers specific conditions for RDIS and ADSL for citizens with special needs and respective organisations.



6.5 ADDRESSING CLIMATE CHANGE

- **Swisscom** is offering special user terminals to elderly users.
- **TDC** promoted a mobile phone, the Emporia, especially targeted for the elderly customers.
- **Telecom Italia** supports Internet courses for the elderly and in its laboratories it develops solutions on home care and telemedicine services.
- **Telefónica** upgraded its accessibility standards to adapt its products to elderly or users with disability. In the UK, Telefónica O₂ recently launched a new 'Access for All' area which provides information and tips on how to choose a mobile phone and get the most from its products and services. The O₂ Foundation in the Czech Republic has recently started to support a free help-line for elderly people. The Golden Line provides medical, psychological, legal and social assistance and information. In Germany, Telefónica recently launched a version of Telefónica's 'Fácil' phones, designed for use by elderly people - 'Einfach-Handy' - through its Tchibo Mobile operation.
- **Telekom Austria** cooperates with the Austrian Council of Senior Citizens to set up the "Seniorkom" initiative which uses training and specialised products to give senior citizens easier access to electronic sources of information.
- **TeliaSonera** developed a mobile key system allowing service staff to unlock doors of elderly people's houses, which saves a lot of time. The Action service brings support to elderly people in their homes. An easy to use work station allows them to communicate with relatives and carers via email or video link as well as with other people in the same situation.
- **Belgacom** sees itself as an enabler for customers to lower their carbon footprint through telecom solutions such as e-billing, digital TV, videoconferencing, mobile working solutions. In parallel, Belgacom is reducing significantly its own CO₂ emissions by sourcing 100% of its electricity from green sources, producing its own solar energy in several locations, consolidating buildings, adapting its fleet policy, digitalising servers, optimising cooling of network sites.
- **BT** reduced its CO₂ emissions in the UK by 58% since 1996 and committed to reduce CO₂ emissions of the whole company worldwide by 80% by 2016. BT announced the biggest wind power project outside the energy sector in the UK to produce 25% of its UK electricity needs by 2016. Carbon reduction measures are incorporated in BT revenue stream and seen as a business opportunity.
- From 2008 onwards, all electricity consumption by **Deutsche Telekom** in Germany will be based on renewable energy and covered by the RECS (Renewable Energy Certificate Systems).
- As a result of many marketing campaigns, over one third of **Elion**'s clients are using e-invoice. By using e-invoices Elion saved in 2007, 17 tons of paper, corresponding to 400 trees.
- **Magyar Telekom** provides travel replacement facilities (videoconference, audio-conference, tele-education, tele-medicine, tele-care/remote assistant service) and number of dematerialised services such as virtual answering machine, online billing, web-taxation, online downloadable films and music. Magyar Telekom also develops combined measures which allow to reduce CO₂ emissions such as flexi-work, intelligent living.



- **Orange** has fixed itself the objective of reducing CO₂ emissions by 20% by 2020. To achieve this, the company is replacing its current transport fleet by lower emission vehicles and limiting employees' travelling, preferring video or conference calls. The company also focuses on reducing energy consumption of its networks, for example through better isolation and optimised ventilation of technical sites, through virtualisation of servers and increasing usage of alternative energy sources.
- **Portugal Telecom** developed internal training programs based on e-learning methodologies and sponsored university studies on the assessment of specific environmental impacts. PT is also involved in collection and re-utilisation of old equipment and in take-back programmes. PT applies sustainability principles throughout the supply chain by including Environmental and Human Rights criteria in the contracts established with the suppliers. Portugal Telecom also increased consumption from renewable energy sources and implemented trigeneration energy technologies (cooling, heating and power efficiency) at its main office buildings. PT has developed electronic invoices for all its businesses (fixed, mobile, internet, IPTV).
- **Slovak Telekom** promotes environment protection through environmentally oriented marketing, encouraging employees to adopt more environmentally friendly actions. The company has made considerable investment into facilities reducing its environmental impact. Slovak Telekom is continuously reducing its energy consumption, limiting air pollution from heating plants, motor generators and transport, and improving waste management.
- As partner of the WWF Climate Group, **Swisscom** has set itself the objective to cut CO₂ emissions by 17% while increasing energy efficiency and developing services that help companies and individuals' to reduce their CO₂ emissions.
- Through its NetDesign subsidiary, **TDC** provides the Telepresence solution in the Scandinavian countries.
- **Telecom Italia** has launched a series of initiatives to reduce the group's greenhouse gas emissions, including a change of car fleet, the replacement of oil-fuelled thermal systems with methane-fuelled or heat pump and the use of renewable energy sources. The TI Group provides products and services enabling to eliminate or reduce the greenhouse gas emissions, such as video- and audio conference services, telework applications, online invoicing and payments, traffic management and infomobility solutions.
- **Telefónica** is engaged on a plan to minimise carbon footprint by reducing energy consumption, using renewable energy, supporting non-carbon energy schemes, and promoting good practice in the countries where the company operates. Telefónica completed studies to better understand its carbon footprint and identify where energy efficiencies can be achieved throughout the network and buildings. O₂ in the UK committed to the Climate Group's 'We're In This Together' campaign which aims to galvanise leading UK businesses to offer their customers more green choices. Telefónica's target is to cut carbon emissions in each operating business by 20 % against the 2006 baseline.
- **Telekom Austria** started a stakeholder dialogue on climate change to discuss the challenges for telecommunication operators. Mobile communication and broadband also have enormous potential to make an active contribution to climate protection. Video conferences, teleworking and electronic services such as e-government solutions help eliminate travel, thus reducing CO₂ emissions.



→ **Telenor** has fixed CO₂ emission cap targets for all markets in which the company operates. In 2008, Telenor and 12 other major international companies based in Norway joined forces in a new partnership called Climate Benefit to cut greenhouse gas emissions. The company fixed itself a 15 million kWh cut target for Norway and a 24% emission cut target by 2011 in Hungary. Record-size heat pumps have been installed in Hungary and Norway headquarters.

→ In 2008, **Telekom Slovenije** was awarded the ISO 14001 Environmental Certificate. This implies among others a systematic monitoring and constant checking of company activities in view of legislation requirements in all fields of environmental management and training employees for responsible environmental management and the rational use of energy and materials. The company has fixed itself a target of 5% energy consumption reduction by 2010.

→ **TEO** has launched an internal environment protection project for company employees.

→ **Turk Telekom** launched early 2008 the e-billing system to avoid paper waste. Turk Telekom also developed Centrex, a special switch service over fixed lines, including numerous functionalities such as call forwarding, call holding, unanswered call, redial, speed dial, call transfer, call pickup, automatic dial, and intercom (intragroup dial), without having to buy a switch or any additional equipment.

7

Ranking in European and World companies



7.1 THE TOP 40 TELCOS WORLDWIDE

Rank	Company	Country	2007 revenues Million €
1	AT&T	USA	86 889
2	Verizon	USA	68 288
3	NTT	Japan	66 269
4	Deutsche Telekom	Germany	62 516
5	Telefónica	Spain	56 441
6	France Télécom	France	52 959
7	Vodafone	UK	51 861
8	China Mobile	China	34 281
9	Telecom Italia	Italy	31 290
10	BT	UK	30 265
11	Sprint Nextel	USA	29 331
12	KDDI	Japan	22 313
13	América Movil	Mexico	20 831
14	Softbank	Japan	17 225
15	China Telecom	China	17 157
16	KT	South Korea	14 671
17	Telstra	Australia	14 472
18	KPN	Netherlands	12 461
19	BCE	Canada	12 152
20	Telenor	Norway	11 526

Rank	Company	Country	2007 revenues Million €
21	TeliaSonera	Sweden	10 414
22	Qwest	USA	10 066
23	China Unicom	China	9 559
24	Vivendi Universal Telecom	France	9 018
25	SK Telecom	South Korea	8 873
26	Telmex	Mexico	8 742
27	China NetCom	China	8 068
28	MTN	South Africa	7 585
29	Hutchison Whampoa	Hong Kong	7 556
30	Time Warner	USA	7 382
31	SingTel	Singapore	7 196
32	BSNL	India	7 017
33	Swisscom	Switzerland	6 749
34	STC	Saudi Arabia	6 718
35	Svyazinvest	Russia	6 697
36	Telemar	Brazil	6 598
37	Alltel	USA	6 432
38	OTE	Greece	6 317
39	Telus	Canada	6 172
40	Portugal Telecom	Portugal	6 148

Source : IDATE

7.2 THE TOP 20 EUROPEAN TELCOS

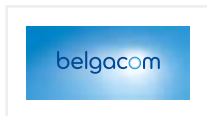
Rank	Company	Country	2007 revenues Million €
1	Deutsche Telekom	Germany	62 516
2	Telefónica	Spain	56 441
3	France Télécom	France	52 959
4	Vodafone	UK	51 861
5	Telecom Italia	Italy	31 290
6	BT	UK	30 265
7	KPN	Netherlands	12 461
8	Telenor	Norway	11 526
9	TeliaSonera	Sweden	10 414
10	Vivendi Universal Telecom	France	9 018
11	Swisscom	Switzerland	6 749
12	OTE	Greece	6 317
13	Portugal Telecom	Portugal	6 148
14	Belgacom	Belgium	6 065
15	TDC	Denmark	5 277
16	Wind	Italy	5 271
17	Turk Telekom	Turkey	5 175
18	Telekom Austria	Austria	4 919
19	Bouygues Telecom	France	4 796
20	Tele2	Sweden	4 694



Source : IDATE

Further information:

Belgacom (Belgium).....	www.belgacom.com	OTE (Greece).....	www.ote.gr
BH Telecom (Bosnia and Herzegovina).....	www.bhtelecom.ba	Portugal Telecom (Portugal).....	www.telecom.pt
BT (UK).....	www.bt.com	RomTelecom (Romania).....	www.romtelecom.ro
BTC (Bulgaria).....	www.btc.bg	Síminn (Iceland).....	www.simi.is
Croatian Telecom (Croatia).....	www.t.ht.hr	Slovak Telekom (Slovakia).....	www.telecom.sk
Cyprus Telecommunications Authority (Cyprus).....	www.cyta.com.cy	Societatea Nationala de Radiocomunicatii (Romania).....	www.radiocom.ro
Deutsche Telekom (Germany).....	www.telekom3.de	Swisscom (Switzerland).....	www.swisscom.com
Eircom (Ireland).....	www.eircom.ie	TDC (Denmark).....	www.tdc.com
Elion (Estonia).....	www.elion.ee	TDF (France).....	www.tdf.fr
Elisa Communications Corporation (Finland).....	www.elisa.com	Telecom Italia (Italy).....	www.telecomitalia.it
Entreprise des Postes et Télécommunications Luxembourg.....	www.pt.lu	Telefónica (Spain).....	www.telefónica.com
Finnet Group (Finland).....	www.finnet.fi	Telefónica O ₂ (Czech Republic).....	www.cz.o2.com
France Telecom (France).....	www.francetelecom.fr	Telekom Austria (Austria).....	www.telekom.at
GO (Malta).....	www.go.com	Telekom Slovenije (Slovenia).....	www.telekom.si
Invitel (Hungary).....	www.invitel.hu	Telekomunikacja Polska (Poland).....	www.telekomunikacja.pl
Koninklijke KPN (The Netherlands).....	www.kpn.com	Telenor (Norway).....	www.telenor.com
Latttelecom (Latvia).....	www.Latttelecom.lv	TeliaSonera (Sweden – Finland).....	www.teliasonera.com
Magyar Telekom (Hungary).....	www.magyartelekom.hu	Teo Lt (Lithuania).....	www.teo.lt
Makedonski Telekom (F.Y.R. of Macedonia).....	www.telekom.mk	Türk Telekomünikasyon (Turkey).....	www.turktelekom.com.tr
Netia Holdings (Poland).....	www.netia.pl	VIPNet (Croatia).....	www.vipnet.hr
ONO (Spain).....	www.ono.es		



Belgacom (Belgium)



Cyprus Telecommunications Authority



Entreprise des Postes et Télécommunications Luxembourg



Koninklijke KPN (The Netherlands)



Ono (Spain)



Síminn (Iceland Telecom Ltd.)



Telecom Italia (Italy)



Telekomunikacja Polska (Poland)



BH Telecom (Bosnia and Herzegovina)



Deutsche Telekom (Germany)



Finnet Group (Finland)



Latticecom (Latvia)



OTE (Greece)



Slovak Telekom (Slovakia)



Telefónica (Spain)



Telenor (Norway)



BT (UK)



Eircom (Ireland)



France Telecom



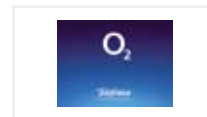
Magyar Telekom (Hungary)



Portugal Telecom



Swisscom (Switzerland)



Telefónica O₂ (Czech Republic)



TeliaSonera (Sweden-Finland)



BTK (Bulgaria)



Elisa Corporation (Finland)



GO (Malta)



Makedonski Telekom (F.Y.R. of Macedonia)



Societatea Nationala de Radiocomunicatii (Romania)



TDC (Denmark)



Telekom Austria



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