



GRI Telecommunications Sector Supplement

**For use with the GRI 2002
*Sustainability Reporting Guidelines***

July 2003



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This document, designed to promote sustainability reporting, has been developed through a unique multi-stakeholder consultative process involving representatives of reporters and report-users from around the world. While the GRI Board of Directors and Secretariat encourage use of the GRI *Guidelines* and this Sector Supplement by all corporations and organisations, the preparation and publication of reports based fully or partially on the *Guidelines* or this Sector Supplement is the full responsibility of those producing them. Neither the GRI Board of Directors nor Stichting Global Reporting Initiative can assume responsibility for any consequences or damages resulting directly or indirectly, from the use of the GRI *Guidelines* or this Sector Supplement, in the preparation of reports or the use of reports based on the GRI *Guidelines* or this Sector Supplement.

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Preface

GRI is pleased to release the pilot version of the Telecommunications Sector Supplement for use in conjunction with the GRI 2002 Sustainability Reporting Guidelines ('the *Guidelines*).

In 2001, GRI launched its supplement programme in response to consistent feedback on the importance of sector-specific guidelines built on the foundation of the *Guidelines*. GRI supplements capture issues essential to sustainability reporting in a specific sector, but which may not appear in the *Guidelines* since they are relevant primarily for a specific range of reporting organisations or sectors. By developing both the *Guidelines* and sectoral supplements, the GRI framework supports the comparison of reporting organisations both across within and across sectors.

The conditions for 'in accordance' with the 2002 *Guidelines* remain unchanged and are independent of whether or not supplements are applied. Over the longer term, the GRI Board of Directors will pursue the continued integration of GRI products in a manner that maximises utility and the efficiency for users of the GRI reporting framework.

In keeping with the GRI due process, this supplement is released as a pilot version. The typical development of a GRI framework documents involves three phases. First, draft versions prepared by working groups are released as working drafts for public consultation and testing. Next, when the document has reached an advance stage of maturity, (typically, following nearly a year of working drafts, consultation, and testing), the documents is reviewed for release as pilot version. Such a release signifies that a document has passed a serious review of its technical merits (both content and the process of development), and is ready for use by reporting organisations.

Following the release of a pilot version, the GRI will establish a structured feedback process under the supervision of its Technical Advisory Council to capture the new learning that emerges through use. This process will engage reporters and users in the broader marketplace to provide feedback resulting from use of the supplement. Based on feedback, the Technical Advisory Council will present its recommendations to the GRI Board of Directors as to whether further refinement and consultation is needed prior to release under the title of Final Version. GRI expects to initiate a pilot process in 2003-2004. New participants will be welcomed in this process, particularly manufacturers of telecomm equipment.

This process is based on common practice used for setting international standards and reflects the basic steps applied to the development of the GRI *Guidelines* since 1999. It should be noted, however, that even 'final' versions will continue to follow the cycle of review, testing and improvement that is required of all GRI framework documents, including the *Guidelines*. GRI recognises the need for stability and predictability and will ensure that these objectives are properly balanced with innovations.

GRI strongly encourages the uptake and use of this pilot supplement. Learning by doing has been the key force driving the continued improvement in the GRI reporting framework, and the supplements will be no exception. This document represents the best thinking to date, developed through the GRI multi-stakeholder process, on sustainability performance indicators for the telecommunications sector, and the culmination of almost a year of work by the Global e-Sustainability Initiative (GeSI) and its many collaborators.

GRI expresses its deep appreciation to the GeSI members and all the stakeholders who participated in the development of this supplement. The GRI looks forward to continued engagement with the participants in this process and welcomes new opportunities for developing supplements in other sectors.

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Introduction

Reporting Using the GRI Framework

The GRI reporting framework comprises of three sets of documents. Together, this family of documents represents a comprehensive framework for measuring and reporting on economic, environmental, and social reporting at an organizational level. The GRI Reporting Framework includes:

- The GRI Sustainability Reporting Guidelines (the “Guidelines”)
- Sector supplements
- Technical protocols

The Guidelines represent the foundation upon which all other GRI reporting documents are based, and outline the core content that is broadly relevant to all organisations regardless of size, sector, or location. All organisations seeking to report using the GRI framework should use the Guidelines as the basis for their report, supported by the other GRI documents as applicable.

In addition to the Guidelines, the GRI family of documents will also include a growing number of sector supplements. While GRI believes that establishing a core set of Guidelines is essential to achieve consistent and comparable reporting across diverse organisations, GRI also recognises that a generic set of indicators may fail to capture aspects of sustainability performance that are unique and crucial to a given industry sector (e.g., mining, automotive, pharmaceuticals). The sector supplements will be designed to provide indicators for use in conjunction with the Guidelines that highlight the specific issues that characterise a given industry sector.

Lastly, GRI is also drafting technical protocols that offer specific guidance on various technical aspects of reporting within the GRI framework, including expectations related to measurement of specific indicators.

For more information on GRI or to obtain a copy of the 2002 GRI Guidelines or other GRI documents, please visit the GRI website at: www.globalreporting.org. Use of the GRI framework is voluntary.

Applicability of this Supplement

This GRI Telecommunications Sector Supplement (Pilot Version) provides guidance on economic, environmental and social performance indicators for the telecommunications sector. It is designed for use in conjunction with the GRI *2002 Sustainability Reporting Guidelines*.

The supplement has been drafted with both service providers and equipment manufacturers in mind. However, it is recognized that the industry representatives on the working group were predominately service providers rather than equipment

manufacturers. One large manufacturer was originally represented on the group but could only attend the initial two working group meetings. For this reason, the group proactively sought the advice and recommendations of equipment manufacturers during the public consultation phase. This process provided the group with an extensive set of insights that helped shape the final content of the supplement.

This pilot document is an attempt to provide guidance that is helpful to both service providers and manufacturers. However, the task force recognized and expected that the supplement will benefit from greater involvement of equipment manufacturers during its next phase as a pilot version. In keeping with the standard GRI document life cycle, this pilot version will undergo subsequent stages of review and revision based on real-life experience in its application by both service providers and manufacturers.

It should also be noted that whilst some of the indicators are more applicable to equipment manufacturers, others are more relevant to service providers. It is recognised that companies will make their own assessment, particularly given the diversity of business models and product portfolios offered within the sector.

Lastly, the telecommunications sector is and will continue to interface with and overlap with the wider information technology and electronics sectors. As such, some of the indicators and commentaries may have applications beyond telecommunications companies. However, this supplement does not seek to provide comprehensive coverage for all information technology-related sectors. Over time, the GRI will seek to develop further supplements that can provide sectoral guidance for the various technology sectors in an integrated manner.

The Process for Developing this Supplement

The supplement was developed by a multi-stakeholder task force, convened by the GRI and GeSI. The task force began its work in August 2002 and developed this document over the course of four meetings. The task force included participants from a range of different constituencies including business, advocacy groups, trade unions, and the investor community. The individual participants come from a range of different geographical regions, including Europe, North America, Asia-Pacific, and Africa. See Annex 1 for the list of task force members.

The 1st meeting was held in London, England in August 2002 during which it was agreed that the supplement should seek to serve both service providers and manufacturers. The task force discussed sustainability opportunities and challenges related to the telecommunication sector and identified a number of issues to cover in the context of a supplement. It was agreed to organize work along three lines: Internal Management, Providing Access, and Technology Applications. At the meeting, the group also agreed upon two co-chairs, one industry and one non-industry participant, to ensure that all perspectives were given an equal weighting during the process.

At the 2nd task force meeting held in Frankfurt, Germany in November 2002, the task force began discussion on potential performance indicators. The outcome of this meeting was made available for public comment as a working draft.

The 3rd task force meeting was held in February 2003 in Nyon, Switzerland. The Task Force continued to draft the supplement and also considered input submitted by external stakeholders. The task force also decided to make a concerted effort to actively consult telecommunication equipment manufacturers on the draft supplement. Fifteen manufacturing companies were contacted and 12 participated in telephone interviews or provided written comments.

The content of the pilot version of the supplement was finalised at the 4th task force meeting in May 2003 in Amsterdam, The Netherlands. In addition, the group also identified issues which it considered important and worth consideration within the GRI framework, but not necessarily telecommunications-specific. This list can be found on the GRI website at: www.globalreporting.org.

About GRI & GeSI

GRI is an independent global institution with the mission of developing a generally accepted framework for sustainability reporting that covers economic, environmental, and social performance. Recognised by the recent UN World Summit on Sustainable Development, GRI is based in Amsterdam, the Netherlands.

The Global e-sustainability Initiative (GeSI), is an Initiative of information and communications technology (ICT) companies to improve the global environment and support sustainable development by promoting business practices and technologies that save energy, minimise waste and help bridge the Digital Divide. GeSI is an alliance that is unique in that it involves both telecommunications operators and suppliers.

GeSI is supported by the United Nations Environment Programme (UNEP) and the International Telecommunications Union (ITU) and was launched on 5 June 2001 during the World Environment Day in Turin, Italy.

As a collective voice, the members of the GeSI will help to influence policies of government, inform the public of its voluntary role in lowering the impact of development, and enjoy the rewards of promoting technology that fosters sustainable development.

Supplement Content

This supplement is for use in conjunction with the GRI 2002 Guidelines, which are available from www.globalreporting.org. In keeping with the GRI reporting framework, the indicators are structured in a hierarchy of: category – aspect – indicator. “Categories” represent broad areas of information, “aspects” more narrow subsets of issues within a category, and “indicators” are the specific measures of performance.

The sector-specific guidance in this document is provided in two sections:

1. Commentary on existing GRI disclosures and indicators (see Table 1).
2. New telecommunications sector-specific performance indicators (see Tables 2, 3 and 4).

The Telecommunication Sector-Specific indicators are organised under the following categories:

- Internal Operations: specific practices related to managing the organization’s facilities and infrastructure.
- Providing Access: approaches to ensuring equitable access to telecommunication products and services.
- Technology Applications: indicators to cover the impacts of telecommunications products and services.

The above structure was chosen to capture issues related to the:

- manufacture of telecommunication products,
- rollout of telecommunication infrastructure,
- operation of sites and corporate/commercial premises, and
- use of telecommunication products and services.

Many of the internal operational issues are captured in the GRI Guidelines. However, the task force identified a number of indicators related to telecommunications-specific structures that are included under the heading of “Internal Operations.”

In considering products and services, two general areas emerged, both linked to the potential of telecommunications to enable changes in modes of living. The first area revolved around questions of equitable access to telecommunications and associated content as part of addressing the digital divide. This area also included the management relationships with customers while providing this access.

The second area related to the impact resulting of applying an organisation’s products and services. Since access can enable rapid changes in consumption patterns and lifestyles, assessing the actual impacts of products and services is essential to understanding contributions to sustainability.

Table 1: Commentary on GRI Indicators

Governance Structure and Management Systems	
GRI Disclosure	Telecommunication Sector Specific Commentary
<p>3.16 Policies and systems for managing upstream and downstream impacts, including:</p> <ul style="list-style-type: none"> - Supply chain management as it pertains to outsourcing and supplier environment and social performance; and - Product and service stewardship initiatives. <p>Stewardship initiatives include efforts to improve product design to minimise negative impacts associated with manufacturing, use and final disposal.</p>	<p>The rapid development of telecommunications products and services adds importance to initiatives that address: design, future take-back, reuse, recycling, and compatibility. Particular relevance would be in the area of:</p> <ul style="list-style-type: none"> • Decoupling the introduction of new products and services from the need for more hardware; • Use of common interfaces for accessories; • Export or re-entry into the market of refurbished products; • Involvement in life cycle analyses and the application of findings to improvements of telecommunication products; and • Providing information about take-back schemes and environmentally preferable disposal channels. <p>Reporting is also encouraged on initiatives to collaborate with suppliers on the above or other aspects of product stewardship.</p>
Indirect Economic Impacts	
<p>EC13. Describe the organisation’s indirect economic impacts. Identify major externalities associated with the reporting organisation’s products and services.</p>	<p>The telecommunications sector brings significant indirect economic effects. For example, prices, bandwidth and processing power can all have considerable impacts on the productivity of individual enterprises, industrial sectors and the wider economy.</p> <p>It has also been asserted that the application of communications technology and computing can affect innovation and competitiveness. Other economic issues of particular importance to the</p>

	<p>communications sector are globalisation, the development of the "knowledge economy", and the impact of access to telecommunications products and services in a development context.</p> <p>Experimentation on qualitative and quantitative reporting techniques against EC13 is strongly encouraged. See annex 1.</p>

Environmental Performance Indicators	
GRI Indicator	Commentary
Materials	
<p>EN1. Total materials use other than water by type. Report in tonnes, kilograms, or volume). Provide definitions used for types of materials.</p>	<p>In defining types of materials, segmentation should allow report users to understand materials that are:</p> <ul style="list-style-type: none"> • banned, restricted, or scheduled for phase out in markets where the organisation operates; • critical (e.g., columbite- tantalite); • represent the largest percentage of overall material inputs. <p>It is recognized that manufacturers and service providers will have different approaches to managing and monitoring material use.</p>
Biodiversity	
<p>EN7. Description of the major impacts on biodiversity associated with the organisation's activities and/or products and services in terrestrial, freshwater, and marine environments.</p>	<p>Response to this indicator should take into account the impacts associated with the development and decommissioning of infrastructure. Examples of such impacts could include: laying cables and installing masts in or near in protected areas and managing wastes during the building of infrastructure.</p>
Emissions, Effluents, and Waste	
<p>EN8. Greenhouse gas emissions (CO2, CH4, N2O, HFCs, PFCs, SF6). Report separate subtotals for each gas in tonnes and in tonnes of CO2 equivalent for the following:</p>	<p>Where possible, also report in a manner that links carbon emissions with products and services.</p>

<ul style="list-style-type: none"> • direct emissions from sources owned or controlled by the reporting entity • indirect emissions from imported electricity, heat, or steam <p>(See WRI-WBCSD Greenhouse Gas Protocol).</p>	
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Social Performance Indicators: Product Responsibility	
GRI Indicator	Commentary
Competition and Pricing	
SO6. Court decision regarding cases pertaining to anti-trust and monopoly regulations.	Include penalties from regulatory authorities.
Customer Health and Safety	
PR1. Description of policy for preserving customer health and safety during use of reporting organisation’s products and services, and extent to which this policy is visibly stated and applied, as well as description of procedures/programmes to address this issue, including monitoring systems and results of monitoring. Explain rationale for any use of multiple standards in marketing and sales of products.	<p>Examples of procedures/programmes to address customer health and safety during the use of telecommunication products and services. This includes:</p> <ul style="list-style-type: none"> • Risk associated with the use of mobile telephones while driving; • Information and assistance to prevent and report on the theft of consumer products; • adverse occupational illnesses associated with teleworking; and • Possible adverse health effects from exposure to EMF. <p>Note: EMF is also addressed in indicators IO4-IO6 and PA8-PA9</p>
Respect for Privacy	
PR3. Description of reporting organisation’s policy, procedures/management systems, and compliance mechanisms for consumer privacy. Identify geographic areas covered by policy.	In a telecommunications context, this includes policies and programmes for data protection. Examples are the encryption and deletion of personal data, the production of telecommunications directories, and the delivery of other data management products and services.

Telecommunication Sector Specific Indicators

Category: Internal Operations

Table 2 – Category: Internal Operations

Investment	
IO 1.	Capital investment in telecommunication network infrastructure broken down by country/region.
IO 2.	Net costs for service providers under the Universal Service Obligation when extending service to geographic locations and low-income groups, which are not profitable. Describe relevant legislative and regulatory mechanisms.
Health and Safety	
IO 3.	Practices to ensure health and safety of field personnel involved in the installation, operation and maintenance of masts, base stations, laying cables and other outside plant. Related health and safety issues include working at heights, electric shock, exposure to EMF and radio frequency fields, and exposure to hazardous chemicals.
IO 4.	Compliance with ICNIRP (International Commission on Non-Ionising Radiation Protection) standards on exposure to radiofrequency (RF) emissions from handsets
IO 5.	Compliance with ICNIRP (International Commission on Non-Ionising Radiation Protection) guidelines on exposure to radiofrequency (RF) emissions from base stations.
IO 6.	Policies and practices with respect to Specific Absorption Rate (SAR) of handsets.
Infrastructure	
IO 7.	Policies and practices on the siting of masts and transmission sites including stakeholder consultation, site sharing, and initiatives to reduce visual impacts. Describe approach to evaluate consultations and quantify where possible.
IO 8.	Number and percentage of stand-alone sites, shared sites, and sites on existing structures.

Category: Providing Access

The following indicators focus on providing connectivity with a special focus on rural or excluded communities to support of social equity in the use telecommunications as a catalyst to create widespread opportunities for sustainable development. However, it is recognized that access alone does not guarantee the ability of communities to take advantage opportunities afforded by technology to improve their quality of life or to lower environmental burdens.

Table 3 – Category: Providing Access

Access to Telecommunication Products and Services: Bridging the Digital Divide ¹	
PA 1.	Policies and practices to enable the deployment of telecommunications infrastructure and access to telecommunications products and services in remote and low population density areas. <i>Include an explanation of business models applied.</i>
PA 2.	Policies and practices to overcome barriers for access and use of telecommunication products and services including: language, culture, illiteracy, and lack of education, income, disabilities, and age. Include an explanation of business models applied.
PA 3.	Policies and practices to ensure availability and reliability of telecommunications products and services and quantify, where possible, for specified time periods and locations of down time.
PA 4.	Quantify the level of availability of telecommunications products and services in areas where the organisation operates. <i>Examples include: customer numbers/market share, addressable market, percentage of population covered, percentage of land covered.</i>
PA 5.	Number and types of telecommunication products and services provided to and used by low and no income sectors of the population. Provide definitions selected. <i>Include explanation of approach to pricing, illustrated with examples such as price per minute of dialogue/bit of data transfer in various remote, poor or low population density areas.</i>
PA 6.	Programmes to provide and maintain telecommunication products and services in emergency situations and for disaster relief.

¹ The majority of the world population is cut off from information and communication technologies: 70% of the world's poor live in rural areas, where access to ICTs is scarce, the international Internet bandwidth is not evenly distributed and a high percentage of the population in least developed countries is illiterate. These disparities create a barrier between different sectors of the population, which affects the capacity to communicate. This barrier can today be defined as the "digital divide". IT is the result of a lack of infrastructure, unfavourable regulatory environment, pricing and market structure, and is threatening to exacerbate the existing social and economic inequalities between countries and communities. (International Telecommunication Union).

Access to Content	
PA 7.	<p>Policies and practices to manage human rights issues relating to access and use of telecommunications products and services. For example:</p> <ul style="list-style-type: none"> • Participation in industry initiatives or individual initiatives related to Freedom of Expression • Legislation in different markets on registration, censorship, limiting access, • Interaction with governments on security issues for surveillance purposes • Interaction with national and local authorities and own initiatives to restrict criminal or potentially unethical content. • Protecting vulnerable groups such as children. <p>Explain how such policies and practices are adapted and applied in different countries.</p>
Customer Relations	
PA 8.	Policies and practices to publicly communicate on EMF related issues. <i>Include information provides at points of sales material.</i>
PA 9.	Total amount invested in programmes and activities in electromagnetic field research. <i>Include description of programmes currently contributed to and funded by the reporting organisation.</i>
PA 10.	Initiatives to ensure clarity of charges and tariffs.
PA 11.	Initiatives to inform customers about product features and applications that will promote responsible, efficient, cost effective, and environmentally preferable use.

Category: Technology Applications

Telecommunications products and services and technology enable significant and rapid changes to modes of living and associated consumption patterns. This has both positive and negative economic, environmental, and social impacts. Many of these impacts arise from the manner in which individuals, businesses and public institutions apply telecommunications technology. The nature and scale of these impacts will vary across countries as a result of different stages of economic development.

For individual organisations, measuring and understanding the impacts associated with the application of its products and services is challenging. However, it is an area of specific interest given the degree of change enabled by the sector, and such measurements can be valuable to improve the organisation's understanding of its overall contribution to sustainable development. Reporting organisations are not expected to report on or be held accountable for all the various social and environmental impacts that can result from the application of their products and services.

While examples of measurement by individual organisations are currently limited, there are potential approaches that reporting companies can take to bring greater robustness and credibility to such efforts. For example:

- Utilizing surveys to measure changes in the consumption patterns, values, and habits of users of telecommunications products and services as a basis for projecting wider economic, environmental, and social impacts. Examples include the environmental and social consequences of e-business activities (such as e-commerce or teleworking) or the application of products and services in the education sector;
- Linking survey techniques with market size or customer numbers in different regional markets as an indication of the potential scale of these impacts;
- Case studies with corresponding indication of the overall scale and frequency of such impacts; and
- Qualitative or quantitative assessment of the “rebound effect” (indirect consequences) that result from customer use of products and services.

In presenting information on product and service impacts, organisations are encouraged to disclose the “sustainability proposition” (or proposed sustainability value-added) associated with the use product or service.

The set of four indicators listed in Table 4 under the aspect of “resource efficiency” are designed to form a simple case study. The goal is to offer a structured approach to disclosing examples of the positive and negative impacts associated with the application of products and/or services. While not benchmarkable in the current form, these indicators represent a first step towards developing approaches to assessing the wider impacts of an organisation's product and service applications. In this context, organisations may also wish to disclose information on sectoral-level projects to assess systemic impacts in which they participate.

In addition to the issues above, the creation and use of intellectual property is a key facet for advancing the industry and its products. This process is dependent on a degree of cooperation in developing certain standards and protocols. The sharing of intellectual property, working in an open source environment, and participation in standardization has been an effective way of developing the telecommunication sector.

Table 4 - Category: Technology Applications

Resource Efficiency	
TA 1.	Provide examples of the resource efficiency of telecommunication products and services delivered.
TA 2.	Provide examples of telecommunication products, services and applications that have the potential to replace physical objects (e.g. a telephone book by a database on the web or travel by videoconferencing)
TA 3.	Disclose any measures of transport and/or resource changes of customer use of the telecommunication products and services listed above. Provide some indication of scale, market size, or potential savings.
TA 4.	Disclose any estimates of the rebound effect (indirect consequences) of customer use of the products and services listed above, and lessons learned for future development. This may include social consequences as well as environmental.
TA 5.	Description of practices relating to intellectual property rights and open source technologies.

Appendix 1: GRI-GeSI Telecommunications Sector Supplement Task Force Members

Mr. Mokhethi Moshoeshoe (co-chair)
African Institute of Corporate Citizenship, South Africa

Ms. Liz. Prowse/Ian Baker, (co-chair)
Cable and Wireless, UK

Mr. Dunstan Hope, (co-chair)
British Telecommunications, UK

Mr. Marcelo Cota,
Committee for Democracy in Information Technology, Brazil

Mr. Luc Perrouin,
France Telecom, France

Mr. Edoardo Gai,
Sustainable Asset Management (SAM Group), Switzerland

Dr. Vijaya Lakshmi,
Development Alternatives, India

Mr Reiner Lemke,
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Mr. Danilo Riva,
Telecom Italia Lab, Italy

Mr. Michael Kuhndt,
Wuppertal Institute, Germany

Mr. Jiro Nakamura,
Nippon Telegraph and Telephone, Japan

Mr. Yasuhiro Ibata,
Nippon Telegraph and Telephone Corporation, Japan

Mr. Neil Anderson,
Union Network International, Switzerland

Mr Nick Hughes,
Vodafone, UK

Mr. Dennis Pamlin,
WWF Sweden

Ms Daniele Goesteli,
Amnesty International, Switzerland

Mr. Martin Davies,
Ericsson, Sweden (from August to December 2002)

Ms Joanne Saleeba,
Telstra Technologies, Australia

Project Liasons:

Mr. Sean Gilbert,
Global Reporting Initiative

Ms. Ama Dadson,
Global e-Sustainability Initiative

Ms. Oshani Perera,
Project Consultant

Appendix 2: Direct, Indirect, and System Effects

The table below lists a range of direct, indirect and systemic effects resulting from the provision and use of telecommunications products and services. These examples and impacts are provided as helpful suggestions to illustrate the terminology used rather than mandate specific examples or applications.

Table 5: Direct, Indirect and System Effects

Effect	Caused by	Examples	Impacts
Direct effects	Tele-communication infrastructure and products	Equipment such as the PC, mobile phones	Environmental and social implications from production, installation, maintenance and end-of-life-management Job creation in the telecom sector
		Communication infrastructure	
		Servers, routers etc.	
Indirect effects	Application by user of telecommunication products and services	E-commerce (B2B, B2C, C2C)	Environmental and social implications by alteration of existing products and service systems Environmental and social effects of new product and services Access to information Access to products and services Communities online Changes in work situations
		Private telephony or email communication	
		Telework	
		E-government	
Systemic effects	A denser communication web, Changes in consumption pattern, new habits, synergy effects	Change in consumption of goods and services	Changes in material flows Changes in energy consumption and green house gas emissions Land-use change
		Change in life style and work patterns	
		Increased information flows	

	with other technologies	Changes in existing economic and democratic systems	<p>Contribution to cultural homogeneity or cultural diversity</p> <p>Changes in civic culture</p> <p>Increased or decreased Digital Divide</p> <p>Changes in resource distribution</p>
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Direct effects refer to the effects caused by the telecommunication infrastructure and equipment, e.g. the material consumption in producing mobile phones and Internet servers.

In-direct effects derive from existing use and habits that are fulfilled through communication-based applications. The reduced need for office space as a result of telework or the increase in just-in-time deliveries thanks to B2B applications are examples of secondary effects.

Systemic effects link performance at the micro-level (e.g., organisational level) with economic, environmental, or social conditions at the macro-level (e.g., regional, national, or global level). They stem from new habits, social structures and consumption patterns that arise through the use of communication products, applications and services when they are used in society, such as the change in commuting distances and times due to potential mobile communication, access to information and the speed of technological development.

Companies are encouraged to report on sector-wide projects in which they are involved that address the systemic effects of the application of telecommunications products and services.