

20 November 2020

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Information and Knowledge Society

Information and Communication Technologies Usage in Households and by Individuals

2020

In the technical note on page 13, where it reads "The sample was dimensioned and stratified by NUTS II in order to produce representative estimates for Portugal and for the Regiões Autónomas dos Açores e da Madeira." it should read "The sample was dimensioned and stratified by NUTS II in order to produce representative estimates for Portugal Continental and for the Regiões Autónomas dos Açores e da Madeira.". Data shown in Table 26 in the Annex have been changed. These corrections have no impact on the press release analytical contents and on the remaining attached tables.

### **Internet and e-commerce users increased significantly**

#### **The percentage of users for educational purposes more than doubled**

In 2020, 84.5% of households in Portugal have an internet connection at home and 81.7% use a broadband connection, which represents a significant increase of more 3.6 pp in relation to the previous year.

In the context of the pandemic, the percentage of internet users increased 3.0 pp in relation to the equivalent period in 2019, in contrast to the stability of results in the previous two years.

The population aged 16 to 74 who used the internet in the 3 months prior to the interview did it mostly to communicate and access information, but it were mainly the learning-related activities that registered the largest increase in 2020: both the proportions of users communicating with teachers and colleagues through educational portals (from 14.5% in 2019 to 30.8% in 2020) and of those attending online courses (from 7.7% to 18.0%) more than doubled.

Among the employed internet users, 31.1% worked in teleworking, especially in the Área Metropolitana de Lisboa, reaching a proportion of 43.2%. For 29.6% of the employed internet users, work at home was associated with the COVID-19 pandemic.

By income classes, households falling in the highest income quintile (20% of the households with the highest income) are those with the highest levels of access to the internet (96.8%) and broadband (94.5%). At the other end, the ones with an equivalent income corresponding to the 1<sup>st</sup> quintile (20% with lower income) have proportions of 66.9% for internet access at home and 62.4% for broadband access.

The percentage of e-commerce users in 2020 showed the largest increase in the data series started in 2002, 7 pp more than in 2019. In 2020, 44.5% of people aged 16 to 74 years old placed orders over the internet in the 12 months prior to the interview and 35.2% in the previous 3 months.

The number of orders placed by e-commerce increased significantly: the group of users who placed 3 to 5 orders increased by 4.0 pp, those who placed 6 to 10 orders increased by 9.5 pp and those who placed more than 10 orders increased by 6.9 pp.

The amount spent per order also increased, by more 15.7 pp in the case of orders between 100 and 499 Euro and by more 8.0 pp for orders with a value equal or higher than 500 Euro.

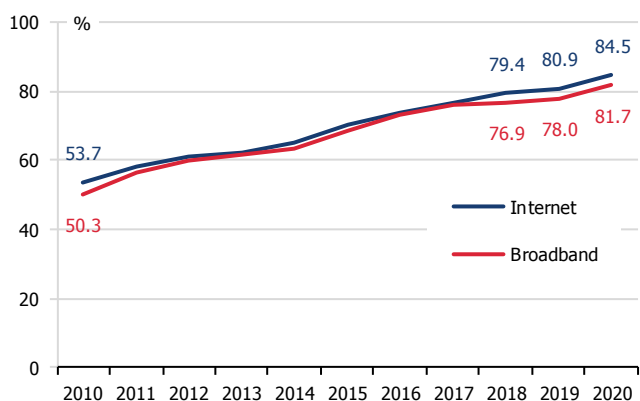
**In 2020, there was a boost in the penetration of internet at home in Portugal**

In 2020, 84.5% of households in Portugal have an internet connection at home, and 81.7% use a broadband connection.

The proportions obtained in 2020 account for an increase of more than 30 percentage points (pp) compared to 2010 and of 3.6 pp more than in the previous year. It was only in 2016 that a larger annual increase was observed for the access to the internet and broadband connections at home.

It is important to note that the period for collecting responses to the survey took place between 21 April and 31 August in a context marked by the impact of the pandemic COVID-19. As a result, one of the effects of this context was to accelerate the more intensive use of the internet (please see the technical note).

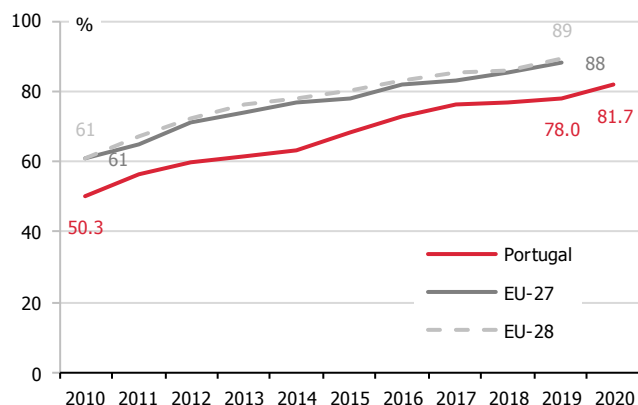
**Figure 1. Proportion of households with internet connection and broadband connection at home, Portugal, 2010-2020**



Despite of growth trend in 2019, the rate of broadband penetration among Portuguese households in 2019

remained lower (minus 10 pp) than the one recorded in the European Union (EU-27)<sup>1</sup>.

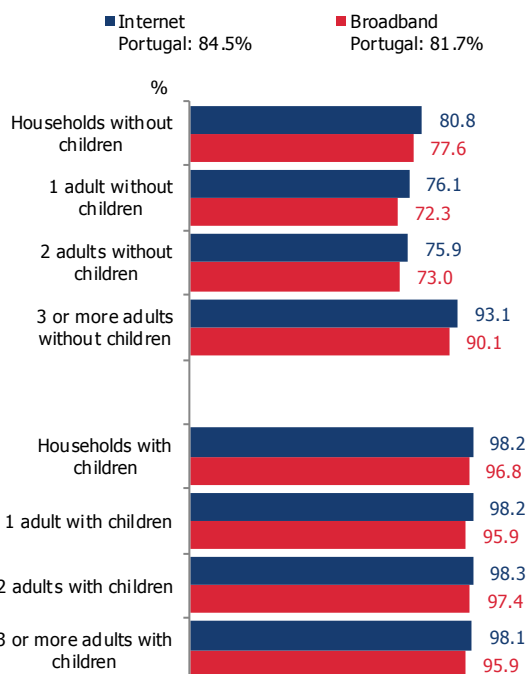
**Figure 2. Proportion of households with broadband connection at home, Portugal, EU-27 and EU-28, 2010-2020**



In 2020, households with children up to 15 years old continue to record higher levels of Internet access (98.2%) and broadband access (96.8%) than the overall resident population.

<sup>1</sup> Following the departure of UK from the EU on 31 January 2020, this publication considers the 27 countries that are currently member states (EU-27) as a reference. However, results for the EU-28 are also included in order to facilitate comparison with the publication of the previous year.

**Figure 3. Proportion of households with internet connection and broadband connection home by family composition, Portugal, 2020**



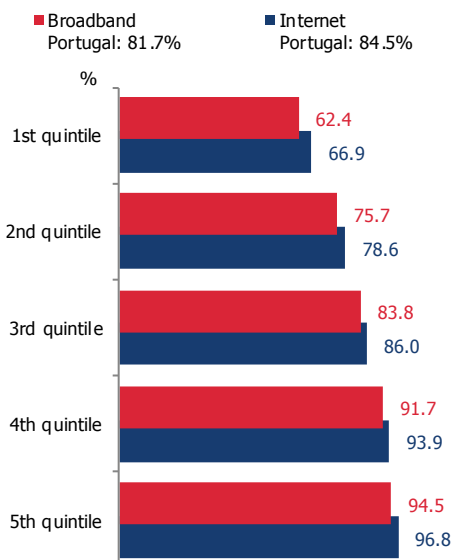
In households without children up to 15 years old, access levels are generally lower (80.8% report having access to the internet at home and 77.6% access by broadband), except when they are composed by three or more adults (without children), where the proportions reach values similar to those of households with children: 93.1% have access to the internet and 90.1% do it through broadband.

### Social inequalities are also expressed in internet access

By income<sup>2</sup> classes, households falling in the highest income quintile (20% of the households with the highest income) are those with the highest levels of access to the internet (96.8%) and broadband (94.5%). At the other end, the ones with an equivalent

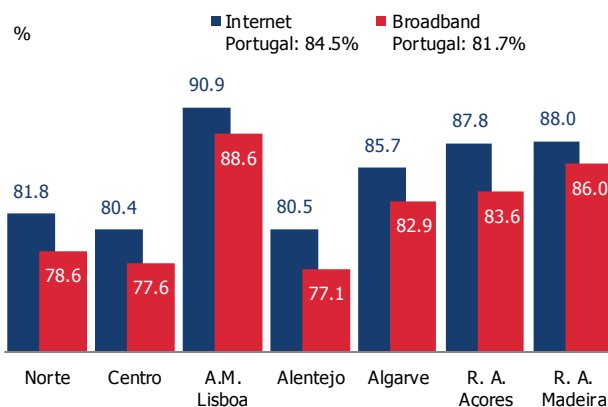
income corresponding to the 1<sup>st</sup> quintile (20% with lower income) have proportions of 66.9% for internet access at home and 62.4% for broadband access.

**Figure 4. Proportion of households with internet connection and broadband connection at home by quintiles of equivalent income, Portugal, 2020**



The internet connection at home and the broadband connection are in 2020 more frequent in the Área Metropolitana de Lisboa, in the Região Autónoma dos Açores, in the Região Autónoma da Madeira and in the Algarve.

**Figure 5. Proportion of households with internet connection and broadband connection at home, NUTS 2, 2020**



<sup>2</sup> Equivalent total income.

Alentejo was also the one region with the highest increase compared to 2019 (6.6 pp in internet access and 5.5 pp in broadband connection), despite being one of the regions with lowest levels of internet and broadband access.

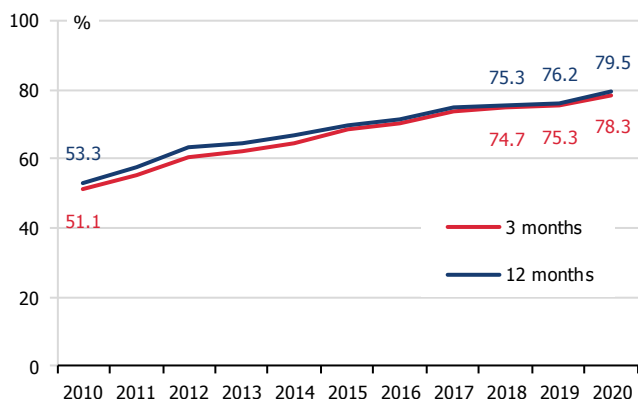
**The proportion of internet users increased by 3.0 pp during lockdown and state of emergency**

The proportion of internet users between February and August 2020 increased 3.0 pp in relation to the equivalent period in 2019, in contrast to the stability of results in the previous two years.

Around 80% of the resident population from 16 to 74 years are internet users in 2020: 79.5% reported having used it in the 12 months prior to the interview and 78.3% in the previous 3 months.

This shows a significant evolution in relation to 2010, when the proportions of internet users represented a little more than half of the relevant population.

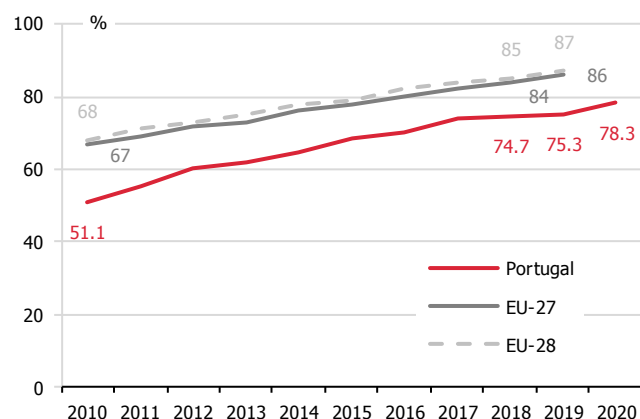
**Figure 6. Proportion of persons aged 16 to 74 years using the internet in the 3 months and in the 12 months prior to the interview, Portugal, 2010-2020**



Yet, despite the increase in the last 10 years (27.2 pp more), the proportion of users in Portugal in 2020

remains lower than the average for the European Union in the previous year (EU-27: 86%).

**Figure 7. Proportion of persons aged 16 to 74 years using the internet in the 3 months prior to the interview, Portugal, EU-27 and EU-28, 2010-2020**



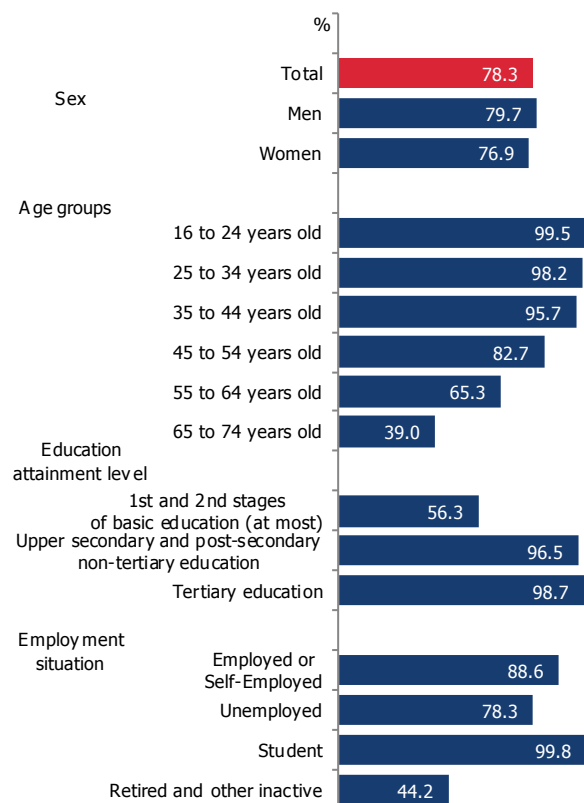
The internet usage rate for women is still 2.8 pp lesser than the one for men (79.7%).

Almost all young people from 16 to 24 years old and students (16-74 years) used the internet in the 3 months prior to the interview.

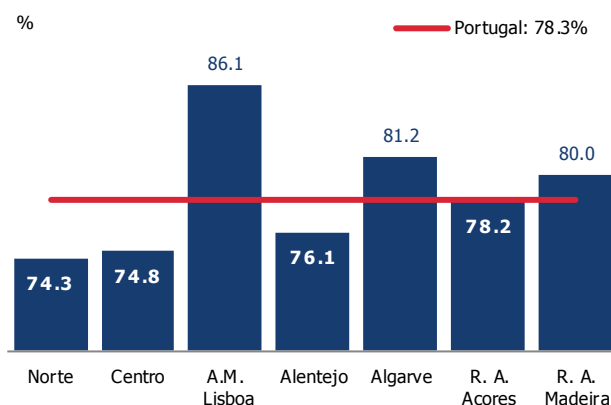
The internet usage rate is also higher for people from 25 to 44 years old and for the population 16 to 74 years old who have completed tertiary education (98.7%) and upper secondary and post-secondary education (96.5 %).

Also above the national average, there are the ones aged 45 to 54 years (82.7%) and people (16-74 years) economically active (88.6% of employees and 78.3% of the unemployed).

**Figure 8. Proportion of persons aged 16 to 74 years using the internet in the 3 months prior to the interview by some sociodemographic characteristics, Portugal, 2020**



**Figure 9. Proportion of persons aged 16 to 74 years using the internet in the 3 months prior to the interview, NUTS 2, 2020**

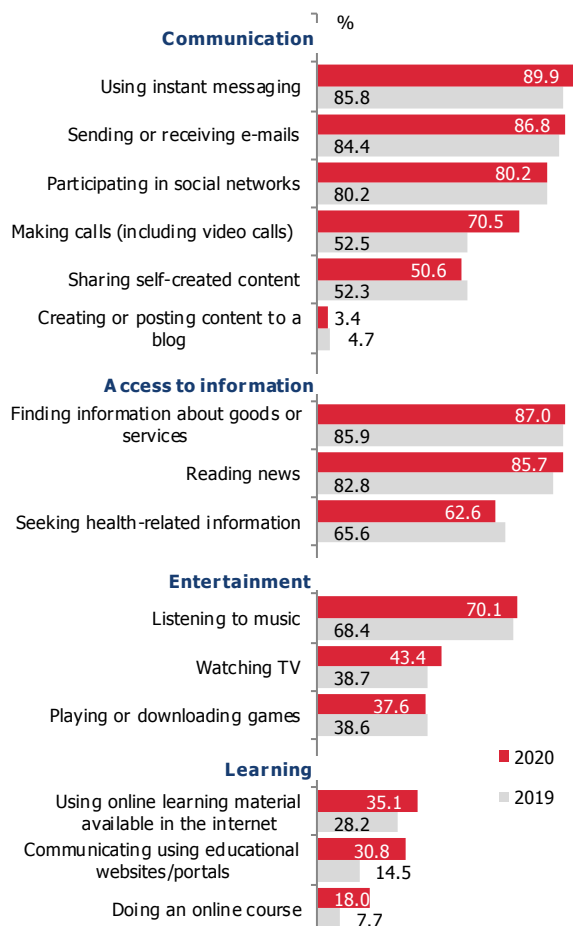


**The percentage of users who communicated with teachers or colleagues through educational portals doubled**

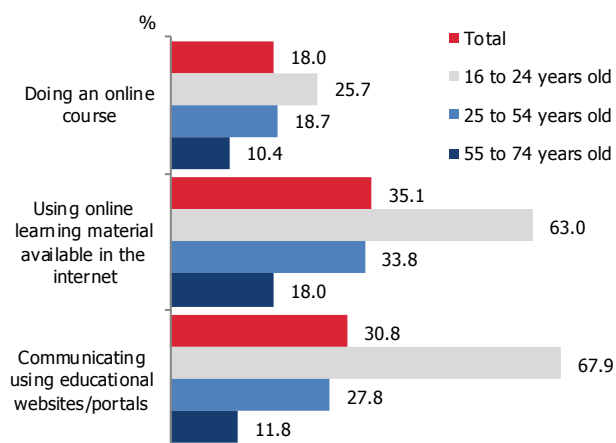
In 2020, the population aged 16 to 74 who used the internet in the 3 months prior to the interview did it mostly to communicate and access information: 89.9% exchanged instant messages (via Whatsapp, Messenger, etc.), 87.0% searched for information about products or services, 86.8% sent or received e-mails, 85.7% read news and 80.2% participated in social networks. With regard to entertainment activities, the main reason for using the internet continues to be listening to music (70.1%).

The Área Metropolitana de Lisboa, Algarve and Região Autónoma da Madeira are the regions with the higher proportions of internet users: 86.1%, 81.2% and 80.0%, respectively. In Região Autónoma dos Açores the proportion of 78.2% is close to the national average (78.3%). The Norte and the Centro have the lowest proportions (74.3% e 74.8%, respectively).

**Figure 10. Proportion of persons aged 16 to 74 years using the internet in the 3 months prior to the interview by internet activities, Portugal, 2019-2020**



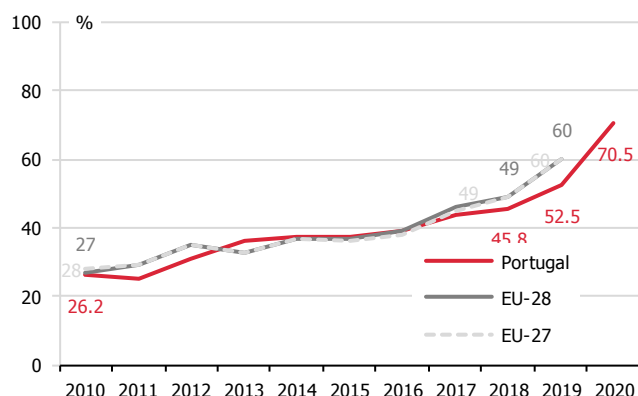
**Figure 11. Proportion of persons aged 16 to 74 years using the internet in the 3 months prior to the interview for learning related activities by age groups, Portugal, 2020**



**Internet voice or video calls among the main uses of the internet**

Of all activities previously analyzed, the one that showed the highest increase (18 pp compared to 2019, for 70.5%) was telephoning or making video calls over the internet.

**Figure 12. Proportion of persons aged 16 to 74 years telephoning or making video calls over the internet in the 3 months prior to the interview, Portugal, EU-27 and EU-28, 2010-2020**



Yet, the activities related to learning purposes were the ones that showed the highest increase in 2020, despite a lower expression for the general population. The survey results indicate that the proportions of users who have communicated with teachers or colleagues through educational portals (from 14.5% in 2019 to 30.8 % in 2020) and those who have attended online courses (from 7.7% to 18.0%) more than doubled in 2020.

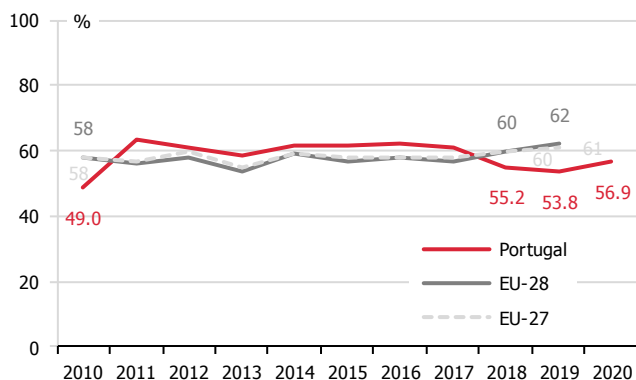
During that year, 67.9% of the population aged 16 to 24 used the internet to communicate through educational portals and 63.0% to use learning material available on the internet.

## More than half of the population uses the internet to interact with the Public Administration

For those who have used the internet in the 12 months prior to the interview in 2020, 56.9% reported having interacted with Public Administration authorities through a website or internet application for at least one of the following purposes: obtaining information, downloading or printing official forms or to complete and submit official forms online.

This proportion however higher than the one obtained in 2019 (3.1 pp in plus), remains below the 2019 EU-27 average (62%).

**Figure 13. Proportion of persons aged 16 to 74 years having contacted with public authorities in the 12 months prior to the interview, Portugal, EU-27 and EU-28, 2010-2020**



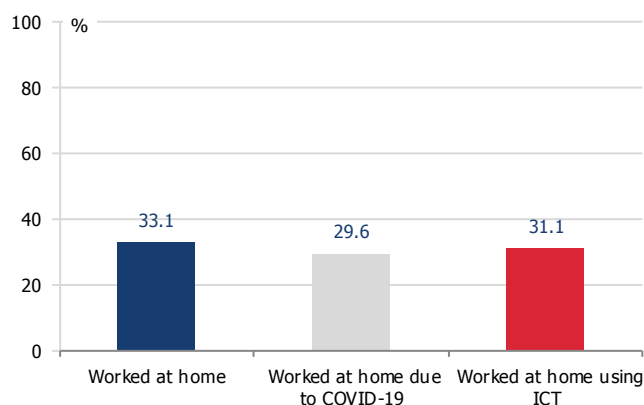
## Almost 30% in teleworking due to the COVID-19 pandemic

Of the employed internet users<sup>3</sup>, 33.1% worked always or almost always at home in the month prior to the interview, and 31.1% worked at home using

<sup>3</sup> The reference population in this case corresponds to persons employed from 16 to 74 years old who used the internet in a period of 3 months prior to the interview.

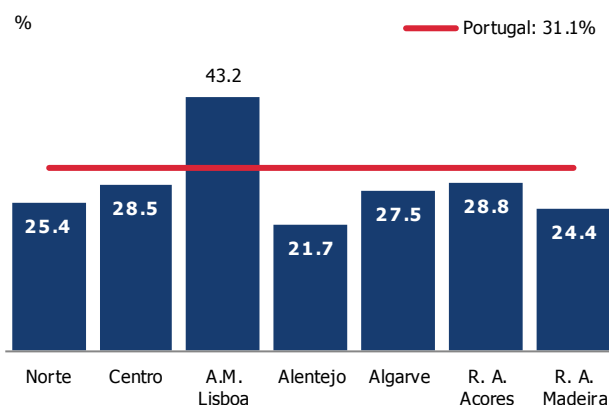
Information and Communication Technologies (ICT), namely computer and/or smartphone.

**Figure 14. Proportion of employed internet users who worked at home in the month prior to the interview, Portugal, 2020**



The Área Metropolitana de Lisboa was the region with the highest proportion of people working at home (43.2%). For 29.6% of the employed internet users, working at home was associated with the pandemic COVID-19.

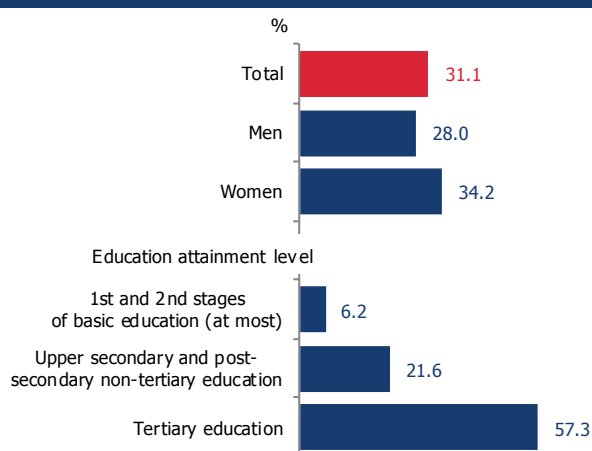
**Figure 15. Proportion of employed internet users who used ICT to work at home in the month prior to the interview, NUTS 2, 2020**



The percentage of people in teleworking was significantly higher for those who had completed tertiary education (57.3%), far above the 21.6% who

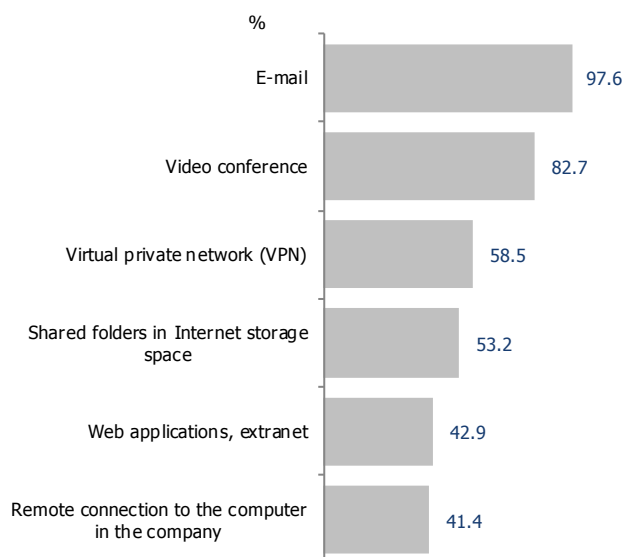
held only upper secondary and post-secondary non-tertiary education and the 6.2% who had completed only basic education. The proportion of women (34.2%) was higher than that registered for men (28.0%).

**Figure 16. Proportion of employed internet users who used ICT to work at home in the month prior to the interview by sex and education attainment level, Portugal, 2020**



The most used ICTs in teleworking were e-mail (97.6% of employees in teleworking), videoconferencing (82.7%), connection via virtual private network (VPN) (58.5%) and shared folders in internet storage space (Cloud Computing) (53.2%). Just over 40% of teleworkers reported using web or extranet applications (42.9%) and remote connection to the computer at the company (41.4%).

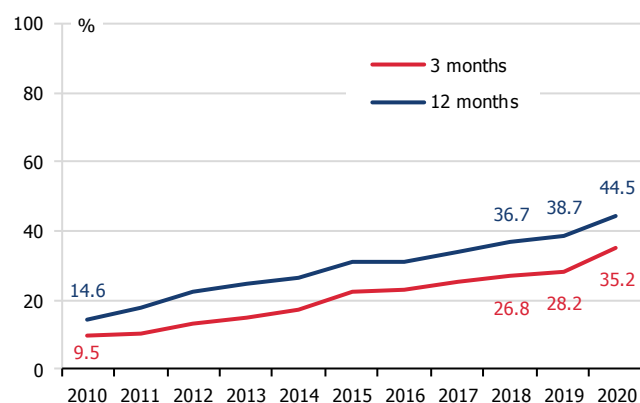
**Figure 17. Proportion of employed internet users who used ICT to work at home in the month prior to the interview by technology used, Portugal, 2020**



**A significant increase in the proportion of e-commerce, by more than 7 pp**

The percentage of e-commerce users registered in 2020 the largest increase within the data series started in 2002, 7.0 pp more than in 2019. In 2020, 44.5% of people aged 16 to 74 years made orders via the internet in the 12 months prior to the interview and 35.2% in the previous 3 months.

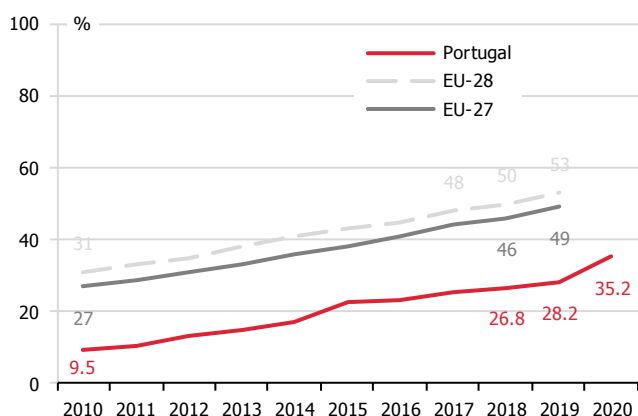
**Figure 18. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months and in the 12 months prior to the interview, Portugal, 2010-2020**





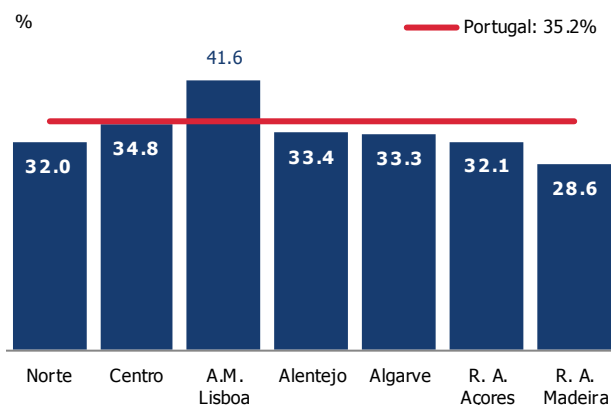
However, with regard to the usage of the internet for e-commerce, Portugal remains below the European Union average. In 2019, 49% of the European population (EU-27) had placed orders in the 3 months prior to the interview.

**Figure 19. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months prior to the interview, Portugal, EU-27 and EU-28, 2010-2020**



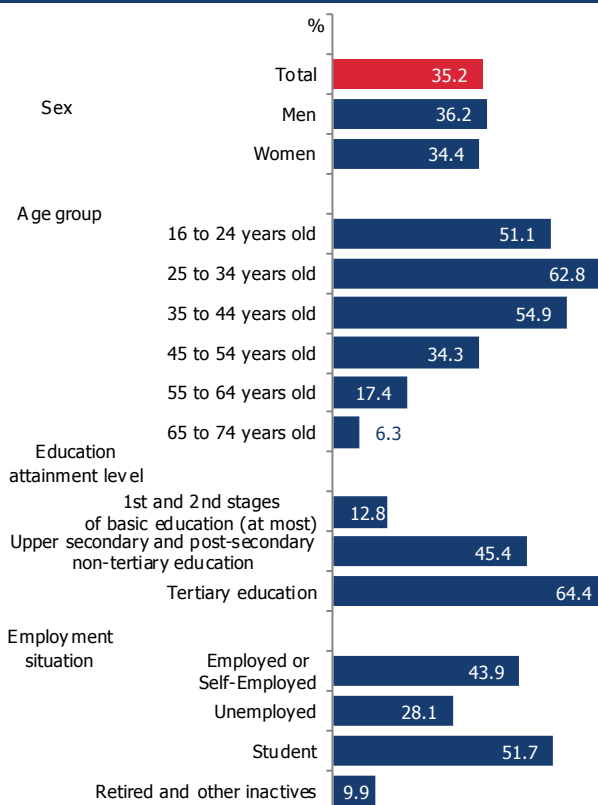
The Área Metropolitana de Lisboa is the only region in which the proportion of people using electronic commerce in the 3 months prior to the interview (41.6%) exceeds the country average (35.2%). The region of Centro is very close to the national average, with 34.8% of e-commerce users.

**Figure 20. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months prior to the interview, NUTS 2, 2020**



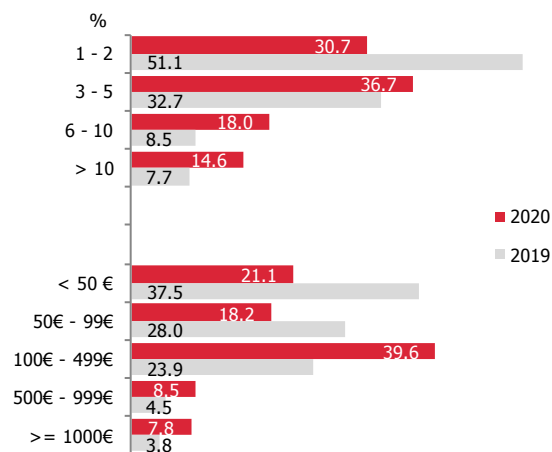
The proportions of internet users who placed orders on the internet in the 3 months prior to the interview are higher for those with tertiary education (64.4%), in the age group from 25 to 34 years old (62.8% of users), students (51.7%) and employees (43.9%). Although with a small difference men tend to place more orders over the internet (36.2%) than women (34.4%).

**Figure 21. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months prior to the interview by some sociodemographic characteristics, Portugal, 2020**



In 2020, the number of orders placed by e-commerce users increased significantly: the percentage of those who placed between 6 and 10 orders increased by 9.5 pp, those who placed more than 10 orders by 6.9 pp and those who placed 3 to 5 orders by 4.0 pp.

**Figure 22. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months prior to the interview by number of orders and amount spent, Portugal, 2019-2020**

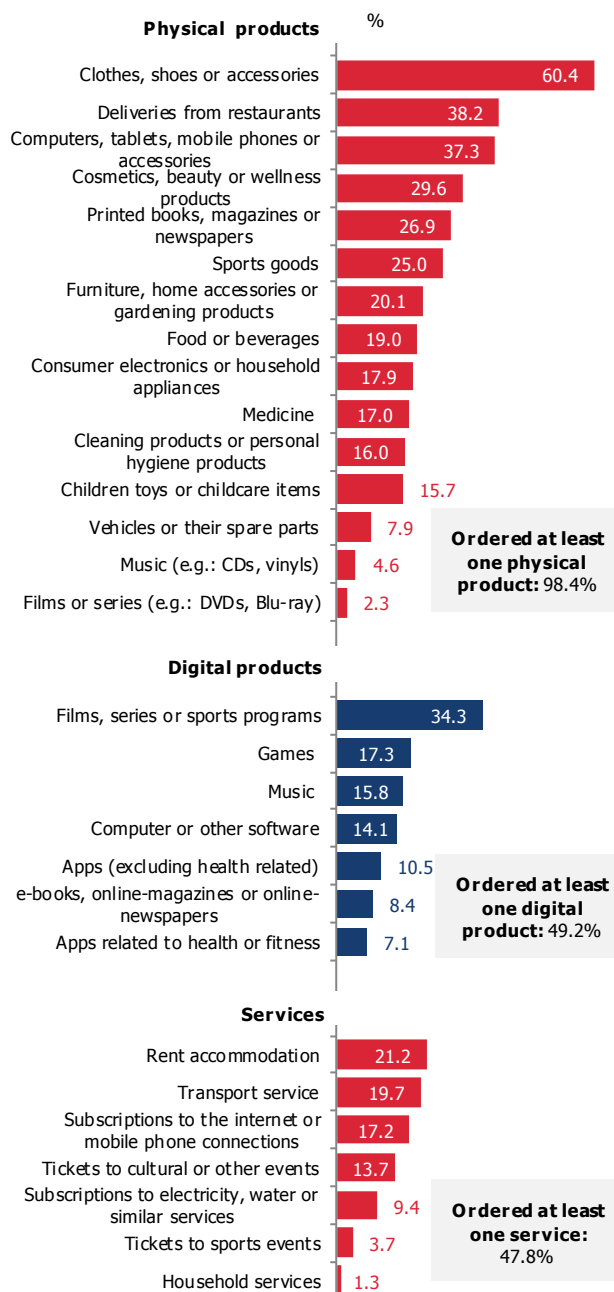


The amount spent per order also increased, by more 15.7 pp in the case of orders between 100 and 499 Euro and by more 8.0 pp in the case of orders with a value equal or greater than 500 Euro.

The majority of e-commerce users placed orders related to physical products (98.4% ordered at least one physical product), compared to products in digital format (49.2%) and services (47.8%).

The most requested type of product was clothing, footwear and fashion accessories (60.4%), followed by meals in takeaway or home delivery (38.2%), computer equipment (37.3%) and digital products related to films, series or sports programs (34.3%).

**Figure 23. Proportion of persons aged 16 to 74 years using e-commerce in the 3 months prior to the interview by type of goods or services ordered, Portugal, 2020**



With regard to orders related to services, the users' preferences relay on accommodation reservations (21.2%), transportation (19.7%) and internet, telephone and mobile phone services (17.2%).

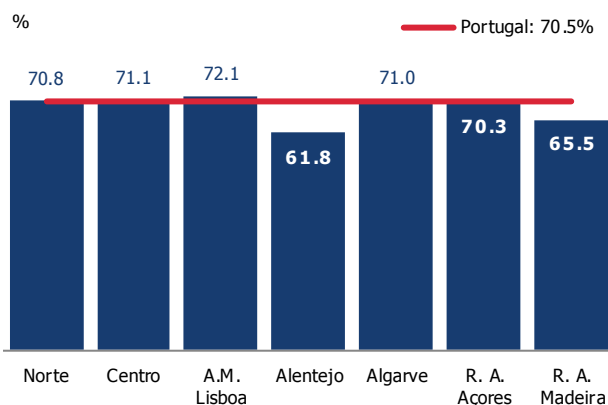
## Internet of Things - 7 out of 10 people use equipment connected to the internet, mainly for entertainment

Among the people who used the internet in the 3 months prior to the interview, 70.5% indicate using some type of equipment or system whose operation is connected to the internet (Internet of Things - IoT).

The region of residence is not very important for the use of this equipment. Most regions are very close to the national average, with the proportions of users varying between 72.1% in the Área Metropolitana de Lisboa and 70.3% in the Região Autónoma dos Açores.

Except for the Região Autónoma da Madeira and the Alentejo, whose proportions of users are 5.0 pp and 8.7 pp, respectively, below the national reference.

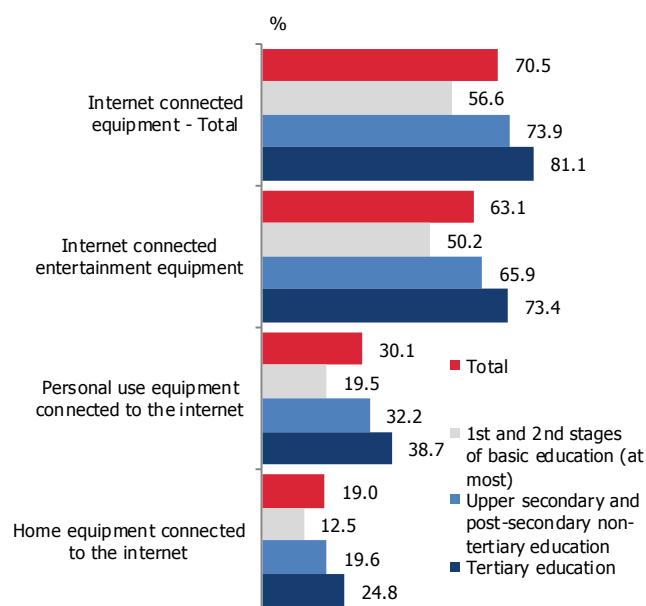
**Figure 24. Proportion of persons aged 16 to 74 years using equipment or systems connected to the internet (Internet Of Things - IoT), Portugal, NUTS 2, 2020**



Internet users with higher education are the ones who most refer using equipment connected to the internet, regardless of the type of equipment used (entertainment, use or personal or domestic): 81.1% of internet users with tertiary education and 73.9 % of those who completed upper secondary and post-secondary non tertiary education reported using

this equipment. Of those who did not reach these levels of education, the proportion of users of IoT equipment (56.6%) is below the national average.

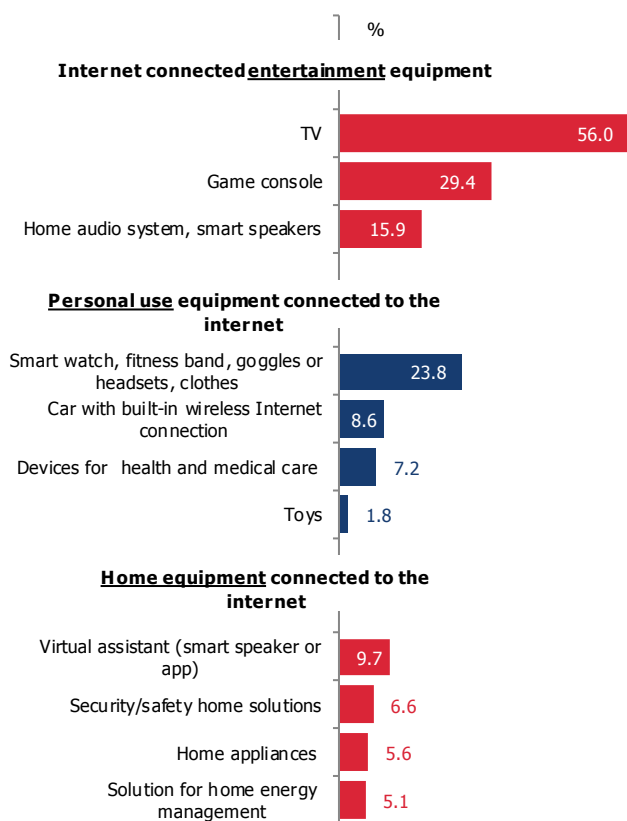
**Figure 25. Proportion of persons aged 16 to 74 years using equipment or systems connected to the internet (Internet Of Things - IoT) by type of equipment and education attainment level, Portugal, 2020**



The equipment connected to the internet most mentioned by internet users is mainly entertainment equipment (63.1% indicated the use of at least one entertainment equipment), compared to personal (30.1%) or home equipment (19.0 %), also with internet connection.

Television with internet connection is the most mentioned equipment (56.0%), followed by the game console connected to the internet (29.4%) and equipment of personal use with internet connection such as smart watches, fitness bands, googles or headsets or clothing and accessories (23.8%).

**Figure 26. Proportion of persons aged 16 to 74 years using equipment or systems connected to the internet (Internet Of Things - IoT) by type of equipment, Portugal, 2020**



## TECHNICAL NOTE

Indicators in this press release were based on data from the Survey on Information and Communication Technologies Usage in households and by Individuals (IUTICF), held by Statistics Portugal on an annual basis since 2002 (since 2006 in accordance with specific Community regulations and pursuant to Regulation (EC) No 808/2004 of the European Parliament and of the Council of 21 April 2004).

The IUTICF is an annual survey based on a representative sample of households resident in Portugal with at least one individual aged 16 to 74 years old and the equal number of persons in this age group.

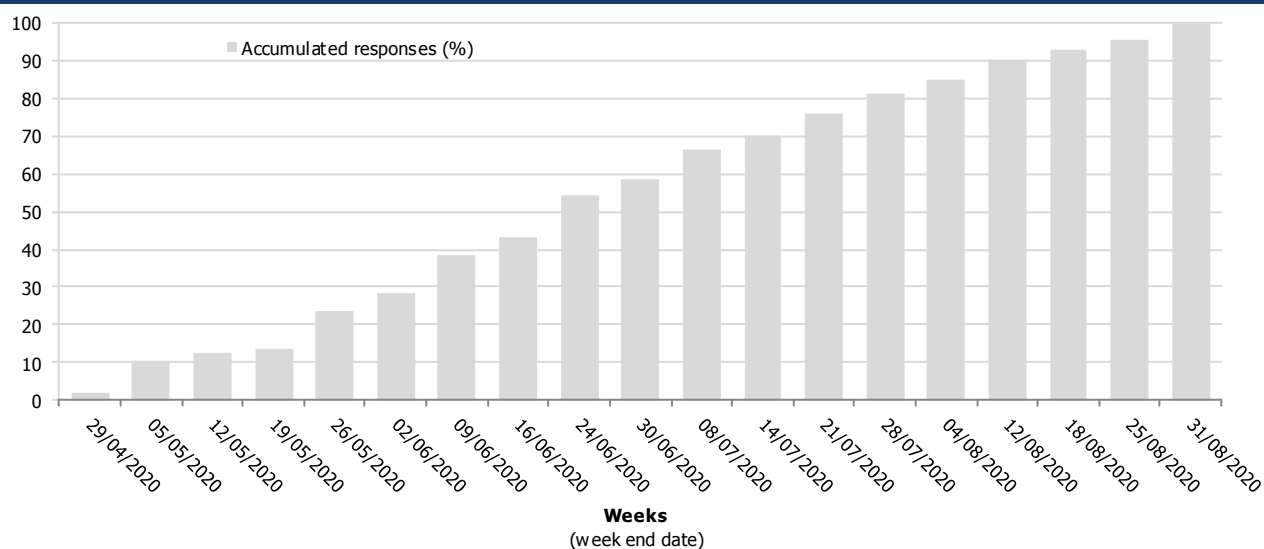
The sample was dimensioned and stratified by NUTS II in order to produce representative estimates for Portugal Continental and for the Regiões Autónomas dos Açores e da Madeira. Nevertheless, for other levels of disaggregation (not necessarily geographic), the representativeness is evaluated according to the associated sampling errors.

The estimates presented have been obtained from a sample of 5,094 households with at least one person aged 16 to 74 years old and an equal number of persons in this age group.

The reference period of the information is the time of the interview for household data. The indicators related to people may be referenced to the 3 months or 12 months prior to the time of the interview.

The collection of responses to the survey took place between 21 April and 31 August. The following figure shows the accumulated weekly frequency of responses in that period.

**Temporal distribution of responses to the Survey on ICT Usage in Households and by Individuals 2020**



### Main concepts:

**BLOG** – An internet diary using user-friendly publication systems.

**BROADBAND** – A connection that makes possible the transmission, at a high speed, of considerable quantities of information, such as television images. The types of broadband connection are: XDSL (ADSL, SDSL, etc.), cable, UMTS or other such as satellite.

**E-COMMERCE** – Business process conducted via Internet Protocol-based networks or via other computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. Orders received via telephone, facsimile, or manually typed e-mails are not counted as electronic commerce. Note: if the e-mail system is used for the transmission of an automatic message, i.e. computer-to-computer without human intervention, then it is considered an e-commerce transaction.

**TECHNICAL NOTE (continuation)**

**E-MAIL** – System that allows the sending of messages by computers inserted in communication networks or by other type of communication equipment.

**EQUIVALENT INCOME** – The result of the division of the household's disposable income by its size in terms of "equivalent adults". Note: "Equivalent adults" is a unit resulting from the application of the OECD modified scale.

**EXTRANET** – An intranet partially open to selected external users outside an organization. A login name and password are needed for outside access to this part of the intranet.

**INTERNET (www access)** – The connection to the set of global computer networks interlinked by the TCP/IP protocol (Transmission Control Protocol/Internet Protocol), where data and service servers are located (FTP, WWW, email, etc.).

**INTERNET OF THINGS** – Set of devices or systems interconnected on the internet that collect and share data, which can be monitored and controlled remotely.

**MODIFIED OECD EQUIVALENCE SCALE** – An equivalence scale that assigns a weight of 1.0 to the first household member aged 14 or over, 0.5 to each additional member aged 14 or more and 0.3 to each member aged less than 14 years old. The use of this scale accounts for differences in size and age composition among households.

**PUBLIC ADMINISTRATION BODY** – A non-personalized service of the public administration constituting a functional unit.

**PRIVATE HOUSEHOLD** – A group of people living at the same dwelling, with either "de jure" or "de facto" family relationships, occupying the all or part of a dwelling; or a single person that fully or partly occupies a dwelling. Note: Guests with maintenance obligations as well as other persons are included in the private household, as long as the fundamental or basic expenses together with income are shared. Domestic personnel cohabiting in the dwelling can also be considered to belong to the private household (if they don't go away every week to the dwelling where their household lives).

**TELEWORK** – Remote work using computer and telecommunications means in the production and/or transfer of work results.

**SOCIAL NETWORK** – Set of sites that privilege the formation of virtual communities with common interests.

**VIDEOCONFERENCE** – Set of telecommunications facilities that allow bidirectional communication through electronic devices, sharing their acoustic and visual spaces through the transmission of audio signals, control and textual documents plus video signals transmitted in real time.

**VIRTUAL PRIVATE NETWORK** – Network used by a company or private group to make connections between sites, for voice or data communications, as if they were dedicated lines between such sites. The equipment used is located on the premises of the public telecommunications operator and forms an integral part of the public network, but has the software arranged in partitions to allow a genuine private network.

**WEBSITE** – A programmed webpage or set of webpages viewed using a browser (Internet Explorer, Netscape, etc.). Each webpage has its own www address (e.g., [www.organismo.pt](http://www.organismo.pt)), known as a URL (Uniform Resource Locator).

To know more, see the INE Portal at [www.ine.pt](http://www.ine.pt) in the subject Research and Development, sub-theme Information Society.