Tecnology as a key driver for home office

In recent decades, the dynamics of technological progress have been imposing the need to review the organizational systems of our society. Digital technologies have become essential at work. In an environment with increasing competitiveness, companies face the challenge of exploring all the potential that will be reflected in their productivity.

The Living and Working in Europe 2015-2018 study by Eurofound (Agency for the Improvement of Living and Working Conditions), describes nine new forms of employment, that advance a new standard, i.e. identifies new ways of performing work characterized essentially by the use of digital technologies and the possibility that work can be done from anywhere and at any time.

Remote working can save workers valuable time, money and stress, among other benefits. In addition, companies can reduce conflicts, expenses for maintaining the workplace, promote increased efficiency, and also contribute to the reduction of pollution, congestion and infrastructure maintenance expenses, namely in roads and public transport.

This new approach to work is, to some extent, facilitated and made possible by the evolution and the adoption of technology. The Internet, of course, is the great technological agent that allows information to be transferred and exchanged in real time, thus enabling new business models to emerge. The dynamics allowed by technology is the key to all changes in the labour market.

In this sense, the use of a VPN (Virtual Private Network) is a very important resource, not only in the dynamics of remote work, but in all activities that involve the use of the internet. A VPN is a secure and encrypted network, quite common in business environments precisely because it favors the confidentiality of information, allowing workers to access the online service as if they were in the company.

For working with documents and spreadsheets, companies can opt for the cloud storage solutions that allow them to create, edit and share content on the servers.

Google and Microsoft have their own solutions for this, the most popular of which are Google Docs and Office 365.

Videoconferencing and synchronous connection features - integrating devices with major communication channels like Skype for Business, Zoom, Microsoft Teams and Google with Hangouts - make conversations more natural and transparent, similar to face-to-face interaction, contributing for a better understanding and a realistic experience. With these tools, managers can hold virtual meetings with their teams to coordinate their tasks, even working from home. These features enable good work performance, even at a distance.

It is important to highlight that the digital transformation begins with the transformation of mentalities. The rules that have been followed in recent years may not be suitable for the next few years and you need to keep a close eye on the developments. After all, change is happening right now and home office is a proof of how technology is changing work relationships.

The performance of functions from home: is there a risk of infrastructure overload?

The transition to remote working models immediately raises questions about the infrastructures and the extent to which there is a real capacity to support massive volumes of citizens in virtual work. The current context of COVID-19 is leading to rapid changes in the number of professionals that each day are working in remote environments, and thus allowing for rapid learning, but also creating an opportunity to test and assess the ability to operate online. The technology already makes remote work possible for many sectors, which allows isolation during the coronavirus containment period, but will broadband support the demand that arises when we have the majority of the population at home?
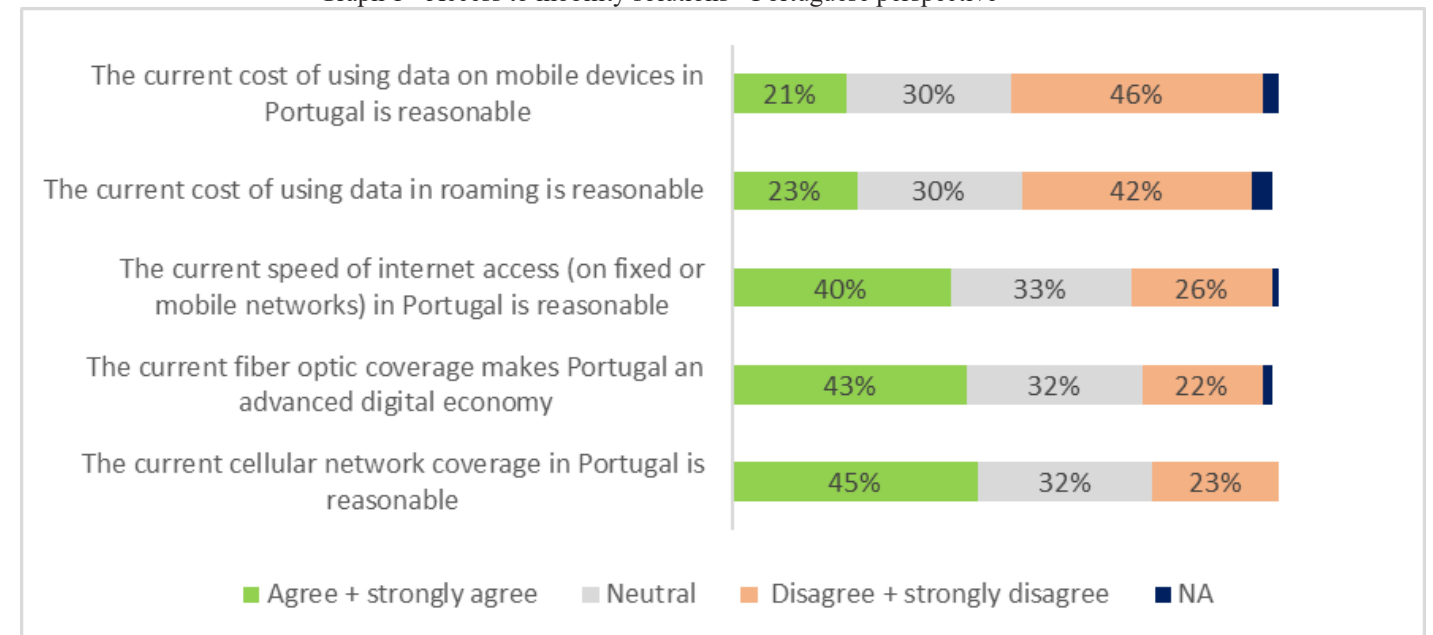
The general concern occurs with the possibility that residential broadband connections, designed to deal only with night traffic peaks, may not be able to cope with the extra load generated by long days with users using simultaneously all the possibilities offered by the internet.

The European Union, fearing that the servers will not support the increase in the number of users, has asked Netflix as a global provider of movies and television series via streaming to reduce the quality of its videos to save internet bandwidth during the coronavirus pandemic. YouTube also announced that it will reduce the quality of streaming on the European continent to avoid a general crash of its servers.

Even the biggest technology companies have admitted that they are facing adversity with changing traffic patterns. Mark Zuckerberg, Facebook's chief executive, said in an interview that the company was experiencing "overloads" in the use of certain services, including a 100% increase in the number of calls made through the WhatApp and Mensseger apps.

When it comes the access to mobility solutions, the scenario in Portugal seems to be even more delicate. The study Portuguese: digital but not so much? 2019 by Ernest & Young showed that, even under normal conditions, about 25% of Portuguese people still have complaints about the coverage of the mobile network or the speed of internet access. This perception hinders the users' experience and limits the market potential for digital businesses. The ability to access the internet in situations of mobility is one of the pillars of the digital revolution. However, for more than 40% of Portuguese people the cost involved in accessing data is still perceived as a potential obstacle.

Graph 1 - Access to mobility solutions - Portuguese perspective

	Agree + strongly agree	Neutral	Disagree + strongly disagree	NA
The current cost of using data on mobile devices in Portugal is reasonable	21%	30%	46%	
The current cost of using data in roaming is reasonable	23%	30%	42%	
The current speed of internet access (on fixed or mobile networks) in Portugal is reasonable	40%	33%	26%	
The current fiber optic coverage makes Portugal an advanced digital economy	43%	32%	22%	
The current cellular network coverage in Portugal is reasonable	45%	32%	23%	

Source: Portuguese: digital but not so much? – Ernest & Young 2019

Some believe that we are prepared to face this overload in the search for internet use. John Grahan, vice president of technology for Cloudfare, an American company that offers web infrastructure, said that while Internet access standards are changing, a global slowdown in access speed has not yet emerged. "It looks like there is enough capacity. Nothing indicates that this will cause problems". American company Akamai, the largest provider of online content, cloud computing and digital security, reported a 50% increase in global daily internet traffic . But even so, the company does not say it is concerned with the increase in demand.

The work of the Labour observatory continues during the period of isolation

During the current period of social isolation, necessary for the containment of COVID-19, the work of the Labour Observatory has explored ways to use the potential that technology can offer.

Thus, the research team is continuing the work leading to the diagnosis of qualification and requalification priorities for the Aveiro territory, by means of various consultation activities with local actors, namely through interviews and questionnaires.

Given the current circumstances, the first round of interviews is advancing, with the collaboration of the target companies, using video conferencing. In March and April, interviews with companies from the TICE and Industry sectors start, contributing to the diagnosis, by offering their vision about the main qualification needs for their business, in the near future, associated with their investments in digital technologies.

In addition, online questionnaires will also be made available soon, which are another means of collecting data from companies, and which will be fundamental to assess which are the main skills gaps, in Aveiro, associated with the digital transformation. The questionnaires are designed to address two hierarchical levels within companies, operational and managerial. The questions are intended to understand how companies position themselves in relation to qualification and requalification, in addition to addressing the prioritization of competencies.

The Labour Observatory would like address a special thanks to the business community, which, despite the demanding current scenario, marked by strong uncertainty and adaptation needs, is partnering with the project and concerned with the sustainability of Aveiro's digital transformation, by agreeing to collaborate with the research team of the Observatory in this remote model.
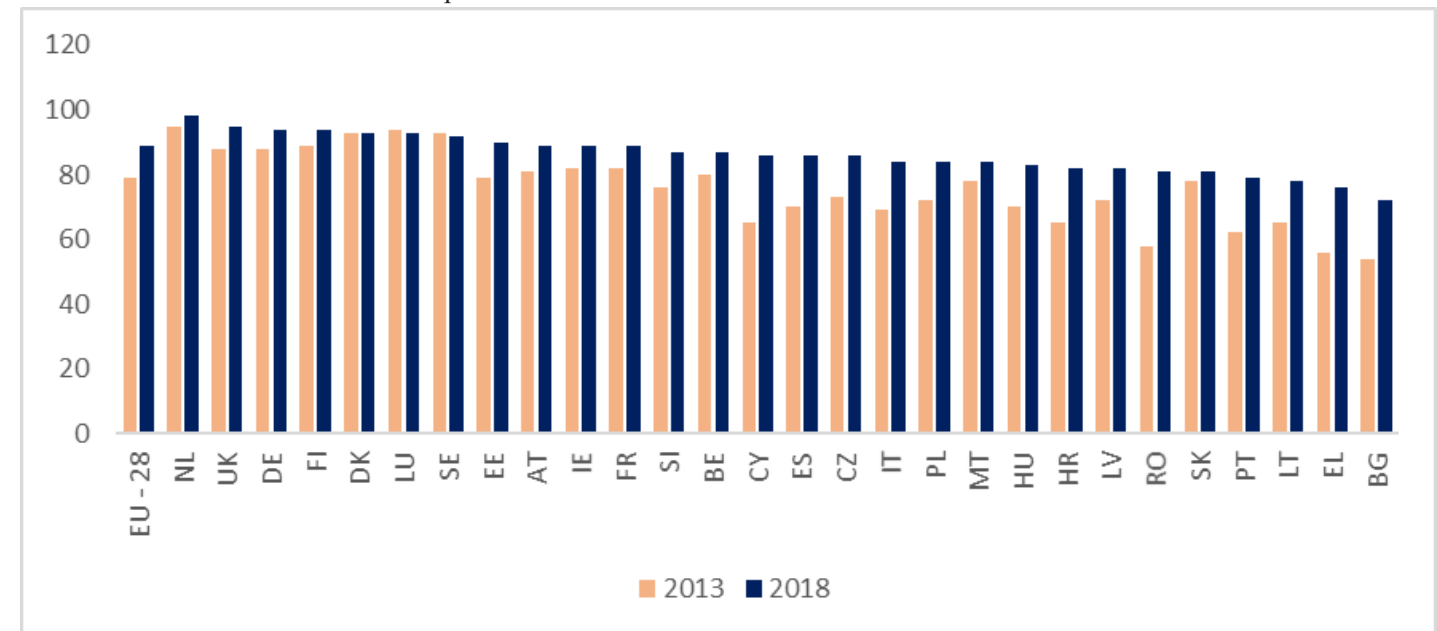
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Did you know...?

The European Union Statistics Office (Eurostat) releases recent statistical data on various aspects of the information society in the European Union, with some focusing on the availability of communication and information technologies (ICT) and their use by individuals and households. The development of the information society is considered fundamental for creating the necessary conditions to promote a modern and competitive economy.

In the statistics of the digital economy and society, Eurostat presents data on household access to the internet between 2013 and 2018 for all European countries.

The highest proportion (98 %) of households with internet access in 2018 was recorded in the Netherlands (see Figure 2), while the United Kingdom, Germany, Finland, Denmark, Luxembourg and Sweden also reported that more than 9 out of every 10 households had internet access. The lowest rate of internet access among the EU Member States was observed in Bulgaria (72 %). However, Bulgaria — together with the Romania, Cyprus, Greece, Portugal and Croatia, there was a rapid expansion in the number of households with access to the Internet in the period considered, with an increase of 17-23 points between 2013 and 2018.

Graph 2 - Internet access of households 2013 - 2018

Source: Eurostat

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To learn more about the Urban Innovative Actions: https://www.uia-initiative.eu/en/uia-cities/aveiro

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